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FOR THE COMMANDER

A handwritten signature in black ink, reading "Thomas J. Alpert". The signature is stylized with a large, sweeping initial "T" and a long, horizontal stroke at the end.

Thomas J. Alpert, Major, USAF
Chief, ESD Lincoln Laboratory Project Office

FOREWORD

Volume 10 of Unclassified Publications of Lincoln Laboratory lists reports published from 15 December 1983 to 31 December 1984, as well as updated information on earlier publications.

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TABLE OF CONTENTS

Foreword	iii
Quarterly Technical Reports	1
Quarterly Technical Summaries.....	1
Semiannual Technical Summary Reports	3
Miscellaneous Progress Reports	5
Technical Reports	7
Journal Articles	11
Meeting Speeches	23
Author Index	37
Subject Index.....	45

QUARTERLY TECHNICAL REPORTS

SOLID STATE RESEARCH

	DTIC No.		DTIC No.
1983:4	AD-A142991	1984:2	AD-A147640
1984:1	AD-A147429	1984:3	AD-A154783

QUARTERLY TECHNICAL SUMMARIES

WEATHER RADAR STUDIES

30 September 1984

SEMIANNUAL TECHNICAL SUMMARY REPORTS

DISTRIBUTED SENSOR NETWORKS

	DTIC No.		DTIC No.
30 September 1983	AD-A146209	31 March 1984	AD-A147638

RESTRUCTURABLE VLSI

31 March 1984	AD-A148145	30 September 1984	AD-A152340
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DARPA/TTO PROGRAM IR BINARY OPTICS

30 June 1984	AD-A152196
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WIDEBAND INTEGRATED VOICE/DATA TECHNOLOGY

31 March 1984	AD-A146054	30 September 1984	AD-A152329
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MISCELLANEOUS PROGRESS REPORTS

DEFENSE SWITCHED NETWORK TECHNOLOGY

	DTIC No.	DTIC No.
30 September 1982	AD-A140609	

GaInAsP LASERS

7 August 1984	AD-A146551
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InP MATERIALS

30 September 1984	AD-A152341
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SUPERCONDUCTIVE SIGNAL-PROCESSING DEVICES

30 November 1984	AD-A152703
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UNCLASSIFIED PUBLICATIONS OF LINCOLN LABORATORY (Previous Volumes)

15 September 1966	AD-803845	15 December 1977	AD-A062413
15 September 1969	AD-863031	15 December 1979	AD-A101092
15 September 1971	AD-734038	15 December 1981	AD-A129036
15 December 1973	AD-778085	15 December 1983	AD-A144354
15 December 1975	AD-A028523		

TECHNICAL REPORTS

TR No.				DTIC No.
618	Angles-Only, Ground-Based, Initial Orbit Determination	Taff, L.G. Randall, P.M.S. Stansfield, S.A.	14 May 1984	ADA142994
634	Expected Energy Method for Electro-Optical SNR Calculations	Mayer, G.J.	2 Feb. 1984	ADA139984
654	Performance of Bayes-Optimal Angle-of-Arrival Estimators	White, F.M.	13 Aug. 1984	ADA146594
662	Electromagnetic Scattering by Arbitrarily Shaped Reflectors: Subreflector Efficiency	Dion, A.R. Muresan, I.V.	31 Oct. 1984	ADA149224
667	Spatial Acquisition Algorithms and Systems for Intersatellite Optical Communication Links	Van Hove, P. Chan, V.W.S.	27 Nov. 1984	ADA150794
669	Electronic Properties of Grain Boundaries in GaAs: A Study of Oriented Bicrystals Prepared by Epitaxial Lateral Overgrowth	Salerno, J.P. Fan, J.C.C. McClelland, R.W. Vohl, P. Mavroides, J.G. Bozler, C.O.	10 May 1984	ADA144358
671	Evaluation of the Comprehension of Non-Continuous, Sped-Up Vocoder Speech: A Strategy for Coping with Fading HF Channels	Lynch, J.T. Gold, B. Tierney, J. Bowers, C.J.	5 Jan. 1984	ADA138650
676	The Lincoln Low-Rate Vocoder: A 1200/2400 bps LPC-10 Voice Terminal	Paul, D.B.	21 Mar. 1984	ADA141291
677	Optimum Leakage Attacks on Combined Area-Terminal Defense Systems	Weiner, S.D.	2 Feb. 1984	ADA139940
680	The Discrimination of Pitch in Pulse Trains and Speech	Mack, M.A. Gold, B.	12 Apr. 1984	ADA142996

Technical Reports

TR No.				DTIC No.
681	Switch Features that Permit an Outboard Processor to Control Routing and Preemption	Lippmann, R.P. Heggestad, H.M. Berger, R.	6 July 1984	ADA146193
683	The Lincoln Laboratory-Aerospace Medical Research Laboratory Digital Speech Test Facility	Tierney, J. Schechter, H.	25 May 1984	ADA144303
684	The Limp Flywheel	Lerner, R.M.	13 June 1984	ADA146034
685	VLSI Self-Testing Using Exhaustive Bit Patterns	Dervisoglu, B.I.	31 May 1984	ADA144299
686	Atmospheric Refraction Error and Its Compensation for Passive Optical Sensors	Dunn, K-P.	4 June 1984	ADA144377
688	Anisotropy and Relaxation Effects of CO ₂ ⁺ Ions in LiTi Ferrite	Dionne, G.F.	15 Aug. 1984	ADA146550
689	The ML Method for Frequency Estimation of Real Sinusoids in Noise	Tsai, M.J.	27 July 1984	ADA146053
691	Speech Enhancement Using Multiple Microphones	Harrison, W.A.	15 Nov. 1984	ADA149223
694	Filtering and Prediction Performance for a Class of Systems with Uncertain Parameters	Chang, C-B. Dunn, K-P.	27 July 1984	ADA146145
699	Tristatic Tracking Filter Used by the Multistatic Measurement System	Smith, M.L.	12 Sep. 1984	ADA146885
701	Correction for Atmospheric Refraction in an Airborne, Operational Environment	Sorvari, J.M.	31 Aug. 1984	ADA146552
705	Statistical Signal Models and Algorithms for Image Analysis	Quatieri, T.F. Dudgeon, D.E. Therrien, C.W.	25 Oct. 1984	ADA149225
707	Speech Analysis Synthesis Based on Perception	Anderson, J.C.	5 Nov. 1984	ADA151320

Technical Reports**TR No.****DTIC No.**

709	Scattering from Conducting Bodies of Revolution: Behavior of the Integral Equations Near Singular Points of Their Kernels	Kelly, E.J.	14 Nov. 1984	ADA149226
712	Comparative Architectures for a Multiple Function Speech Processor	Singer, E.	18 Dec. 1984	ADA150873

JOURNAL ARTICLES

JA No.

- | | | | |
|------|--|--|--|
| 5297 | Application of State Estimation to Target Tracking | Chang, C-B.
Tabaczynski, J.A | IEEE Trans. Autom. Control, Vol. AC-29, No. 2, February 1984, pp. 98-109 |
| 5356 | Maximum Likelihood Spectral Estimation and Its Application to Narrow-Band Speech Coding | McAulay, R.J. | IEEE Trans. Acoust., Speech, Signal Process., Vol. ASSP-32, No. 2, April 1984, pp. 243-251 ADA147582 |
| 5399 | Automated Foucault Test for Focus Sensing | Kocher, D.G. | Appl. Opt., Vol. 22, No. 12, 15 June 1983, pp. 1887-1892 |
| 5425 | Properties of Separable Covariance Matrices and Their Associated Gaussian Random Processes | Therrien, C.W.
Fukunaga, K. | IEEE Trans. Pat. Anal. Mach. Int., Vol. PAMI-6, No. 5, September 1984, pp. 652-656 |
| 5429 | 20 GHz Optical Waveguide Sampler | Molter-Orr, L.A.
Haus, H.A.
Leonberger, F.J. | IEEE J. Quantum Electron., Vol. QE-19, No. 12, December 1983, pp. 1877-1884 |
| 5452 | Optimal Searches for Asteroids | Taff, L.G. | Icarus, Vol. 57, No. 2, February 1984, pp. 259-266 |
| 5454 | An Overview of Packet-Switching Communications | Heggstad, H.M. | IEEE Commun. Mag., Vol. 22, No. 4, April 1984, pp. 24-31 ADA147934 |
| 5464 | Image Enhancement for the Visually Impaired | Peli, E.
Peli, T. | Opt. Eng., Vol. 23, No. 1, January/February 1984, pp. 47-51 |
| 5465 | Electron Devices on Piezoelectric Semiconductors: A Device Model | Withers, R.S. | IEEE Trans. Sonics Ultrason., Vol. SU-31, No. 2, March 1984, pp. 117-123 |

Journal Articles

JA No.

- | | | | |
|------|--|---|--|
| 5468 | Effect of Nitridation of Silicon Dioxide on Its Infrared Spectrum | Naiman, M.L.
Kirk, C.T., Jr.
Aucoin, R.J.
Terry, F.L.
Wyatt, P.W.
Senturia, S.D. | J. Electrochem. Soc.,
Vol. 131, No. 3, March
1984, pp. 637-640 |
| 5471 | Signal Convexity and Noise Convexity of the Chernoff and Divergence Distances | Fishman, P.M.
Jones, L.K. | IEEE Trans. Info. Theory,
Vol. IT-30, No. 6,
November 1984, pp. 854-856 |
| 5476 | Analysis of an EHF Aplanatic Zoned Dielectric Lens Antenna | Rotman, W. | IEEE Trans. Antennas
Propag., Vol. AP-32, No. 6,
June 1984, pp. 611-617
ADA147584 |
| 5487 | A System Executive for Real-Time Microcomputer Programs | Heath, W.S. | IEEE Micro, Vol. 4, No. 3,
June 1984, pp. 20-32 |
| 5488 | Experience with Speech Communication in Packet Networks | Weinstein, C.J.
Forgie, J.W. | IEEE J. Selec. Areas
Commun., Vol. SAC-1,
No. 6, December 1983,
pp. 963-980 ADA147058 |
| 5489 | Laser Direct Writing for VLSI | Ehrlich, D.J.
Tsao, J.Y. | VLSI Electronics:
Microstructure Science,
Vol. 7, Academic Press,
New York, 1983, pp. 129-164 |
| 5495 | Use of Plasma-Deposited Si_3N_4 as an Oxidation Mask in the Fabrication of GaAs Shallow-Homojunction Solar Cells | Turner, G.W.
Connors, M.K. | J. Electrochem. Soc.,
Vol. 131, No. 5, May
1984, pp. 1211-1213 |
| 5502 | Generalized Analysis of Pressure Induced Nonlinear Optical Processes | Yee, S.T.K.
Fujimoto, J.G. | Opt. Commun., Vol. 49,
No. 5, 1 April 1984,
pp. 376-382 |

Journal Articles

JA No.

- | | | | |
|------|---|--|--|
| 5514 | Low-Loss GaInAsP
Buried-Heterostructure
Optical Waveguide Branches
and Bends | Johnson, L.M.
Liau, Z-L.
Groves, S.H. | Appl. Phys. Lett.,
Vol. 44, No. 3,
1 February 1984,
pp. 278-280 |
| 5522 | Broad-Band Guided-Wave
Electrooptic Modulators | Becker, R.A. | IEEE J. Quantum
Electron., Vol. QE-20, No. 7,
July 1984, pp. 723-727 |
| 5525 | A Compact Q-/K-Band Dual
Frequency Feed Horn | Lee, J.C. | IEEE Trans. Antennas
Propag., Vol. AP-32, No. 10,
October 1984, pp. 1108-1111 |
| 5526 | A Simple Method for
Sampling In-Phase and
Quadrature Components | Rader, C.M. | IEEE Trans. Aerosp.
Electron. Syst., Vol. AES-20,
No. 6, November 1984,
pp. 821-824 |
| 5527 | Zone-Melting Recrystalliza-
tion of Thick Silicon on
Insulator Films | Atwater, H.A.
Smith, H.I.
Thompson, C.V.
Geis, M.W. | Mater. Lett., Vol. 2,
No. 4A, March 1984,
pp. 269-273 |
| 5528 | Optimal Design of Amor-
phous/Crystalline Tandem
Cells | Fan, J.C.C.
Palm, B.J. | Solar Cells, Vol. 11,
No. 3, April 1984,
pp. 247-261 |
| 5532 | Maskless, Chemical Etching of
Submicrometer Gratings in
Single-Crystalline GaAs | Podlesnik, D.V.
Gilgen, H.H.
Osgood, R.M.
Sanchez, A. | Appl. Phys. Lett.,
Vol. 43, No. 12,
15 December 1983,
pp. 1083-1085 |
| 5534 | Structural Characterization by
Transmission Electron
Microscopy of Silicon Grown
Over Submicrometer-Period
Gratings of Deposited Tungsten | Vojak, B.A.
Rathman, D.D.
Burns, J.A.
Cabral, S.M.
Efremow, N.N. | Appl. Phys. Lett.,
Vol. 44, No. 2,
15 January 1984,
pp. 223-225
ADA147820 |
| 5535 | Topographic Imperfections in
Zone Melting Recrystallized
Si Films on SiO ₂ | Chen, C.K.
Geis, M.W.
Tsaur, B-Y.
Chapman, R.L.
Fan, J.C.C. | J. Electrochem. Soc.,
Vol. 131, No. 12,
December 1984,
pp. 1707-1711
ADA151482 |

Journal Articles

JA No.

- | | | | |
|------|---|--|--|
| 5536 | Monolithic Silicon Bolometers | Downey, P.M.
Jeffries, A.D.
Meyer, S.S.
Weiss, R.W.
Bachner, F.J.
Donnelly, J.P.
Lindley, W.T.
Mountain, R.W.
Silversmith, D.J | Appl. Opt., Vol. 23,
No. 6, 15 March 1984,
pp. 910-914 |
| 5537 | Electron-Beam Customization,
Repair, and Testing of
Wafer-Scale Circuits | Shaver, D.C. | Solid State Technol.,
Vol. 27, No. 2,
February 1984, pp. 135-139 |
| 5538 | Band Structure of α -Sn and
Ge-Sn Alloys | Groves, S.H.
Paul, W. | IEE Proc. I, Vol. 131,
No. 3, June 1984, pp. 109-110 |
| 5539 | Nonreciprocal Laser-
Microchemical Processing:
Spatial Resolution Limits
and Demonstration of 0.2- μ m
Linewidths | Ehrlich, D.J.
Tsao, J.Y. | Appl. Phys. Lett.,
Vol. 44, No. 2,
15 January 1984,
pp. 267-269
ADA147903 |
| 5542 | Heterodyne Radiometry
Measurements of the 557 GHz
H ₂ O Rotational Line | Dionne, G.F.
Fetterman, H.R.
Erickson, N.R.
Parker, C.D.
Fitzgerald, J.F. | IEEE J. Quantum
Electron., Vol. QE-20,
No. 3, March 1984,
pp. 188-190 ADA147785 |
| 5543 | Exciton Transport in Optically
Excited Al _x Ga _{1-x} As-GaAs
Single Quantum Well | Le, H.Q.
Lax, B.
Maki, P.A.
Palmateer, S.C.
Eastman, L.F. | J. Appl. Phys., Vol. 55,
No. 12, 15 June 1984,
pp. 4367-4372 |
| 5544 | Deep UV Exposure of
Ag ₂ Se/GeSe ₂ Utilizing an
Excimer Laser | Polasko, K.J.
Ehrlich, D.J.
Tsao, J.Y.
Pease, R.F.W.
Marinero, E.E. | IEEE Electron Device
Lett., Vol. EDL-5, No. 1,
January 1984, pp. 24-26 |

Journal Articles

JA No.

- | | | | |
|------|---|---|---|
| 5545 | Fabrication, Characterization, and Analysis of Mass-Transported GaInAsP/InP Buried-Heterostructure Lasers | Liau, Z-L.
Walpole, J.N.
Tsang, D.Z. | IEEE J. Quantum Electron., Vol. QE-20, No. 8, August 1984, pp. 855-865 ADA149328 |
| 5546 | Efficient AlGaAs Shallow-Homojunction Solar Cells | Gale, R.P.
Fan, J.C.C.
Turner, G.W.
Chapman, R.L.
Pantano, J.V. | Appl. Phys. Lett., Vol. 44, No. 6, 15 March 1984, pp. 632-634 |
| 5547 | Spectral Properties of Semiconductor Diode Lasers | Mooradian, A. | Proc. 23rd Scottish Univ. Summer School in Physics, Edinburgh, August 1982, pp. 213-234 |
| 5549 | Dry Etching Induced Damage in Si and GaAs | Pang, S.W. | Solid State Technol., Vol. 27, No. 4, April 1984, pp. 249-256 |
| 5550 | Mode-Locked Operation of Co:MgF ₂ and Ni:MgF ₂ Lasers | Johnson, B.C.
Moulton, P.F.
Mooradian, A. | Opt. Lett., Vol. 10, No. 4, April 1984, pp. 116-118 ADA147794 |
| 5551 | Lasers, Their Development, and Applications at M.I.T. Lincoln Laboratory | Rediker, R.H.
Melngailis, I.
Mooradian, A. | IEEE J. Quantum Electron., Vol. QE-20, No. 6, June 1984, pp. 602-615 |
| 5553 | Linewidth Measurements of a (GaAl)As Diode Laser with a High Reflectivity Coating | Lenth, W. | Appl. Phys. Lett., Vol. 44, No. 3, 1 February 1984, pp. 283-285 |
| 5554 | Comments on "The Singular Integral Problem in Surfaces" | Heath, G.E. | IEEE Trans. Antennas Propag., Vol. AP-32, No. 4, April 1984, pp. 428-430 |
| 5557 | Spatial-Resolution Limits of Laser Patterning: Submicrometer Projection Microchemistry | Ehrlich, D.J.
Tsao, J.Y. | Mater. Res. Soc. Symp. Proc., Vol. 29, 1984, pp. 195-202 ADA149325 |

Journal Articles

JA No.

- | | | | |
|------|---|---|--|
| 5559 | Passive Ti:LiNbO ₃ Channel Waveguide TE-TM Mode Splitter | Yap, D.
Johnson, L.M.
Pratt, G.W. | Appl. Phys. Lett.,
Vol. 44, No. 6, 15 March
1984, pp. 583-585 |
| 5560 | Molecular Beam Epitaxy of GaAs and AlGaAs on Si | Tsaur, B-Y.
Metze, G.M. | Appl. Phys. Lett.,
Vol. 45, No. 5, 1 September
1984, pp. 535-536
ADA147400 |
| 5561 | A Self-Aligned Dual-Grating GaAs Permeable Base Transistor | Vojak, B.A.
McClelland, R.W.
Lincoln, G.A., Jr.
Calawa, A.R.
Flanders, D.C.
Geis, M.W. | IEEE Electron Device
Lett., Vol. EDL-5, No. 7,
July 1984, pp. 270-272
ADA147252 |
| 5562 | Residual Donors in LEC Indium Phosphide | Dean, P.J.
Skolnick, M.S.
Cockayne, B.
MacEwan, W.R.
Iseler, G.W. | J. Cryst. Growth,
Vol. 67, No. 3, August
1984, pp. 486-494 |
| 5564 | Signal Correlation Using a One-Dimensional Electro-absorptive CCD Spatial Light Modulator | Kingston, R.H. | Proc. IEEE, Vol. 72,
No. 7, July 1984,
pp. 954-961 |
| 5565 | Amplitude Distribution of Composite Terrain Radar Clutter and the K-Distribution | Jao, J.K. | IEEE Trans. Antennas
Propag., Vol. AP-32,
No. 10, October 1984,
pp. 1049-1062 |
| 5567 | Voice and Data Communications on an Experimental Wideband Internetwork System | Heggestad, H.M. | J. Telecommun. Networks,
Vol. 3, No. 2, Summer
1984, pp. 131-146 |
| 5569 | The Future of High-Efficiency Solar Cells | Fan, J.C.C. | Solar Cells, Vol. 12,
No. 1-2, June-July 1984,
pp. 51-62 |

Journal Articles

JA No.

- | | | | |
|------|---|--|--|
| 5570 | Annealing of Damage in Se ⁺ -Implanted Indium Phosphide | Woodhouse, J.D.
Donnelly, J.P.
Nitishin, P.M.
Owens, E.B.
Ryan, J.L. | Solid-State Electron.,
Vol. 27, No. 7, July
1984, pp. 677-686
ADA147972 |
| 5571 | Laser Microchemical Techniques for Reversible Restructuring of Gate-Array Prototype Circuits | Ehrlich, D.J.
Tsao, J.Y.
Silversmith, D.J.
Sedlacek, J.H.C.
Mountain, R.W.
Graber, W.S. | IEEE Electron Device
Lett., Vol. EDL-5, No. 2,
February 1984, pp. 32-35 |
| 5573 | Molecular Astronomy Using Heterodyne Detection at 691 GHz | Peck, D.D.
Fetterman, H.R.
Buhl, D.
Chin, G.
Petuchowski, S. | Int. J. Infrared
Millimeter Waves, Vol. 5,
No. 3, March 1984,
pp. 329-340 |
| 5574 | X-Ray Photoelectron-Spectroscopy Study of the Chemical Structure of Thermally Nitrided SiO ₂ | Vasquez, R.P.
Hecht, M.H.
Grunthaner, F.J.
Naiman, M.L. | Appl. Phys. Lett.,
Vol. 44, No. 10, 15 May
1984, pp. 969-971 |
| 5575 | The Effect of Base-Schottky Geometry on Si PBT Device Performance | Rathman, D.D.
Vojak, B.A.
Astolfi, D.K.
Stern, L.A. | IEEE Electron Device
Lett., Vol. EDL-5, No. 6,
June 1984, pp. 191-193 |
| 5578 | Patterned Photonucleation of Chemical Vapor Deposition of Al by UV-Laser Photodeposition | Tsao, J.Y.
Ehrlich, D.J. | Appl. Phys. Lett.,
Vol. 45, No. 6, 15 Sep-
tember 1984, pp. 617-619
ADA146896 |
| 5580 | Flight Test Results for an Experimental GPS C/A-code Receiver in a General Aviation Aircraft | Campbell, S.D.
LaFrey, R.R. | Navigation, Vol. 30, No. 4,
Winter 1983-1984,
pp. 350-368 |

Journal Articles

JA No.

- | | | | |
|------|--|---|---|
| 5582 | Triple Ion Implantation Technique for Formation of Shallow <i>npn</i> Bipolar Transistor Structures in Silicon | Tsaur, B-Y.
Woodhouse, J.D. | Appl. Phys. Lett.,
Vol. 44, No. 10, 15 May
1984, pp. 1005-1007
ADA147995 |
| 5584 | UV-Laser Photodeposition from Surface-Adsorbed Mixtures of Trimethylaluminum and Titanium Tetrachloride | Tsao, J.Y.
Ehrlich, D.J. | J. Chem. Phys., Vol. 81,
No. 10, 15 November 1984,
pp. 4620-4625
ADA149326 |
| 5585 | Wide-Band Electrooptic Guided-Wave Analog-to-Digital Converters | Becker, R.A.
Woodward, C.E.
Leonberger, F.J.
Williamson, R.C. | Proc. IEEE, Vol. 72,
No. 7, July 1984,
pp. 802-819 |
| 5586 | Developments in Radar Imaging | Ausherman, D.A.
Kozma, A.
Walker, J.L.
Jones, H.M.
Poggio, E.C. | IEEE Trans. Aerosp.
Electron. Syst.,
Vol. AES-20, No. 4,
July 1984, pp. 363-400
ADA151533 |
| 5587 | Spectral Characteristics of (GaAl)As Diode Lasers at 1.7 K | Harrison, J.
Mooradian, A. | Appl. Phys. Lett.,
Vol. 45, No. 4, 15 August
1984, pp. 318-320
ADA147193 |
| 5590 | Low Threshold GaInAsP/InP Buried-Heterostructure Lasers with a Chemically Etched and Mass-Transported Mirror | Liau, Z-L.
Walpole, J.N.
Tsang, D.Z. | Appl. Phys. Lett.,
Vol. 44, No. 10, 15 May
1984, pp. 945-947
ADA147996 |
| 5593 | Unified Multiple-Beam Uplink Configuration for EHF Satellite Communications | Eaves, R.E.
Kolba, D.P. | J. Spacecraft, Vol. 21,
No. 1, January-February
1984, pp. 108-112 |
| 5595 | Theoretical Analysis of Coherently Coupled Optical Waveguide Bends | Johnson, L.M.
Yap, D. | Appl. Opt., Vol. 23,
No. 17, 1 September
1984, pp. 2988-2990 |

Journal Articles

JA No.

- | | | | |
|------|---|---|---|
| 5597 | Growth and Patterning of GaAs/Ge Single-Crystal Layers on Si Substrates by Molecular Beam Epitaxy | Sheldon, P.
Jones, K.M.
Hayes, R.E.
Tsauro, B-Y.
Fan, J.C.C. | Appl. Phys. Lett.,
Vol. 45, No. 3, 1 August
1984, pp. 274-276 |
| 5599 | GaAs MESFET's Fabricated on Monolithic GaAs/Si Substrates | Choi, H-K.
Tsauro, B-Y.
Metze, G.M.
Turner, G.W.
Fan, J.C.C. | IEEE Electron Device
Lett., Vol. EDL-5, No. 6,
June 1984, pp. 207-208 |
| 5600 | Coupling Between Successive Ti:LiNbO ₃ Waveguide Bends and Branches | Yap, D.
Johnson, L.M. | Appl. Opt., Vol. 23,
No. 17, 1 September 1984,
pp. 2991-2999 ADA148146 |
| 5601 | Q-Switching of Low-Threshold Buried-Heterostructure Diode Lasers at 10 GHz | Tsang, D.Z.
Walpole, J.N.
Liau, Z-L.
Groves, S.H.
Diadiuk, V. | Appl. Phys. Lett.,
Vol. 45, No. 3, 1 August
1984, pp. 204-206
ADA147401 |
| 5602 | On Initial Orbit Determination | Taff, L.G. | Astron. J., Vol. 89, No. 9,
September 1984,
pp. 1426-1428 ADA146912 |
| 5603 | Multiple Waveguide Lens | Haus, H.A.
Molter-Orr, L.A.
Leonberger, F.J. | Appl. Phys. Lett.,
Vol. 45, No. 1, 1 July
1984, pp. 19-21 |
| 5606 | Optical Interconnections for VLSI Systems | Goodman, J.W.
Leonberger, F.J.
Kung, S-Y.
Athale, R.A. | Proc. IEEE, Vol. 72,
No. 7, July 1984,
pp. 850-866 |
| 5607 | High Frequency Heterodyne Spectroscopy with Current-Modulated Diode Lasers | Lenth, W. | IEEE J. Quantum
Electron., Vol. QE-20,
No. 9, September 1984,
pp. 1045-1050
ADA150628 |

Journal Articles

JA No.

- | | | | |
|------|--|--|---|
| 5608 | Anomalous Saturated-Absorption Pressure Shifts in CO ₂ | SooHoo, K.L.
Freed, C.
Thomas, J.E.
Haus, H.A. | Phys. Rev. Lett.,
Vol. 53, No. 15,
8 October 1984,
pp. 1437-1440 |
| 5611 | Optimal Design of CdS- and Cd _{0.8} Zn _{0.2} S-Based Single-Junction and Multijunction Solar Cells | Fan, J.C.C.
Palm, B.J. | Solar Cells, Vol. 12,
No. 4, September 1984,
pp. 401-420 |
| 5612 | Effects of Ionizing Radiation on SOI/CMOS Devices Fabricated in Zone-Melting-Recrystallized Si Films on SiO ₂ | Tsaur, B-Y.
Mountain, R.W.
Chen, C.K.
Turner, G.W.
Fan, J.C.C. | IEEE Electron Device Lett., Vol. EDI-5, No. 7,
July 1984, pp. 238-240
ADA146975 |
| 5613 | Experimental Tests of Open-Loop Maximum-Power-Point Tracking Techniques for Photovoltaic Arrays | Hart, G.W.
Branz, H.M.
Cox, C.H., III | Solar Cells, Vol. 13,
No. 2, December 1984,
pp. 185-195 |
| 5614 | Low-Loss Multiple-Branching Circuit in Ti-Indiffused LiNbO ₃ Channel Waveguides | Becker, R.A.
Johnson, L.M. | Opt. Lett., Vol. 9,
No. 6, June 1984,
pp. 246-248 |
| 5616 | Frequency-Agile Electro-optically Q-Switched CO ₂ Laser for DIAL Measurements | Marcus, S. | Rev. Sci. Instrum.,
Vol. 55, No. 12,
December 1984,
pp. 1952-1954 ADA150587 |
| 5617 | Computer-Aided Design of Quartz Elliptical Deflector Templates | Hovey, D.L. | Fusion, Vol. XXXI, No. 2,
May 1984, pp. 42-45 |
| 5618 | AlGaAs Double-Heterostructure Diode Lasers Fabricated on a Monolithic GaAs/Si Substrate | Windhorn, T.H.
Metze, G.M.
Tsaur, B-Y.
Fan, J.C.C. | Appl. Phys. Lett.,
Vol. 45, No. 4,
15 August 1984,
pp. 309-311 ADA147320 |
| 5620 | Composite TaSi ₂ /n ⁺ Poly-Si Formation by Rapid Thermal Annealing | Kwong, D.L.
Kwor, R.
Tsaur, B-Y. | IEEE Electron Device Lett., Vol. EDL-5,
No. 5, May 1984, pp. 133-135 |

Journal Articles

JA No.

- | | | | |
|------|---|---|---|
| 5622 | Oxygen in Zone-Melting-Recrystallized Silicon-On-Insulator Films: Its Distribution and Possible Role in Sub-Boundary Formation | Fan, J.C.C.
Tsaur, B-Y.
Chen, C.K.
Dick, J.R.
Kazmerski, L.L. | Appl. Phys. Lett.,
Vol. 44, No. 11,
1 June 1984,
pp. 1086-1088 |
| 5623 | Advances in LEC Growth of InP Crystals | Iseler, G.W. | J. Electron. Mater.,
Vol. 13, No. 6, November
1984, pp. 989-1011 |
| 5627 | Picosecond Gain Measurements in a GaAlAs Diode Laser | Lenth, W. | Opt. Lett., Vol. 9,
No. 9, September 1984,
pp. 396-398 ADA147993 |
| 5635 | Traveling-Wave Electro-optic Modulator with Maximum Bandwidth-Length Product | Becker, R.A. | Appl. Phys. Lett.,
Vol. 45, No. 11,
1 December 1984,
pp. 1168-1170 ADA150629 |
| 5636 | "Thermal Fixing" of Ti-indiffused LiNbO ₃ Channel Waveguides for Reduced Photorefractive Susceptibility | Becker, R.A. | Appl. Phys. Lett.,
Vol. 45, No. 2, 15 July
1984, pp. 121-123
ADA147195 |
| 5637 | Optical Guided-Wave Gallium Arsenide Monolithic Interferometer | Donnelly, J.P.
DeMeo, N.L. Jr.
Ferrante, G.A.
Nichols, K.B.
O'Donnell, F.J. | Appl. Phys. Lett.,
Vol. 45, No. 4,
15 August 1984,
pp. 360-362 ADA147251 |
| 5644 | Use of Spatial Time-Division Repetition Rate Multiplication of Mode-Locked Laser Pulses to Generate Microwave Radiation from Opto-electronic Switches | Mooradian, A. | Appl. Phys. Lett.,
Vol. 45, No. 5,
1 September 1984,
pp. 494-496 ADA147129 |
| 5646 | Special Issue on ELF Communications, Guest Editorial | Burrows, M.L. | IEEE J. Oceanic Eng.,
Vol. OE-9, No. 3,
July 1984, pp. 125-127 |

Journal Articles

JA No.

- | | | | |
|------|--|--|---|
| 5652 | Merged CMOS/ Bipolar Technologies Utilizing Zone-Melting-Recrystallized SOI Films | Tsaur, B-Y.
Mountain, R.W.
Chen, C.K.
Fan, J.C.C. | IEEE Electron Device Lett., Vol. EDL-5, No. 11, November 1984, pp. 461-463 |
| 5653 | Comparison of Laser-Initiated and Thermal Chemical Vapor Deposition of Tungsten Films | Deutsch, T.F.
Rathman, D.D. | Appl. Phys. Lett., Vol. 45, No. 6, 15 September 1984, pp. 623-625 ADA147402 |
| 5654 | Donor Identification in Liquid Phase Epitaxial Indium Phosphide | Skolnick, M.S.
Dean, P.J.
Groves, S.H.
Kuphal, E. | Appl. Phys. Lett., Vol. 45, No. 9, 1 November 1984, pp. 962-964 |
| 5656 | Metal-Semiconductor Field-Effect Transistors Fabricated in GaAs Layers Grown Directly on Si Substrates by Molecular Beam Epitaxy | Metze, G.M.
Choi, H-K.
Tsaur, B-Y. | Appl. Phys. Lett., Vol. 45, No. 10, 15 November 1984, pp. 1107-1109 ADA149001 |
| 5658 | Long-Term Prospects for Lasers in Microfabrication | Ehrlich, D.J. | Laser Focus/ Electro-Optics, Vol. 20, No. 10, October 1984, pp. 108-110 |
| 5676 | Quantum Well Oscillators | Sollner, T.C.L.G.
Tannenwald, P.E.
Peck, D.D.
Goodhue, W.D. | Appl. Phys. Lett., Vol. 45, No. 12, 15 December 1984, pp. 1319-1321 ADA150698 |

MEETING SPEECHES

MS No.

5264	Recent Advances in Transition-Metal-Doped Tunable Lasers	Moulton, P.F. Mooradian, A.	Proc. Intl. Conf. on Lasers, Peking, China, May 1980, pp. 437-447
5899A	Raman Scattering as a Probe of Thin-Films	Brueck, S.R.J.	Proc. DARPA Workshop on Diamond-Like Carbon Coatings, 19-20 April 1982, pp. 214-223 ADP002599
5903	A Predictor Model for EHF Communication Satellite System Availabilities in the Presence of Rain	Schwab, L.M. Simmons, A.J.	31st Symp. of the Electromagnetic Wave Propagation Panel, 18-22 October 1982, pp. 25-1 — 25-11
5929	IR Detectors: Heterodyne and Direct	Spears, D.L.	Workshop on Optical and Laser Remote Sensing, Technical Digest, 9-11 February 1982, pp. H5-1 — H5-10
5931	Coherent IR Radar Technology	Gschwendtner, A.B. Harney, R.C. Hull, R.J.	Workshop on Optical and Laser Remote Sensing, Technical Digest, 9-11 February 1982, pp. J1-1 — J1-14
5959	S-Parameter Measurements Using a Time Interval Counter to Obtain Phase	Hodsdon, D.M.	ELECTRO '82, Boston, MA, 25-27 May 1982, pp. 4-1 — 4-4
6115	Complex Reflectivity and Refractive Index Profiles from Reflectivity Magnitude Measurements	Goldner, R.B. Quatieri, T.F. Grimbergen, M.N.	SPIE, Vol. 401, <i>Thin Film Technologies</i> , Geneva, Switzerland, 1983, pp. 206-210
6131A	Report on the Lincoln Boolean Synthesizer (LBS)	Southard, J.R. Domic, A. Crouch, K.W.	IEEE Intl. Conf. on Computer-Aided Design, Digest of Tech. Papers, 12-15 September 1983, pp. 192-193

Meeting Speeches

MS No.

- | | | | |
|-------|--|---|---|
| 6232 | Resolution and Accuracy, Ambiguity and Anomaly for Range-Spread Speckle Targets | Shapiro, J.H. | SPIE, Vol. 415, <i>Coherent Infrared Radar Systems and Applications II</i> , 1983, pp. 142-146 ADA147551 |
| 6233A | Superconductive Tapped Delay Lines for Low-Insertion-Loss Wideband Analog Signal-Processing Filters | Withers, R.S.
Wright, P.V. | Proc. 37th Annual Frequency Control Symp., Philadelphia, PA, 1-3 June 1983, pp. 81-87 |
| 6240 | LiNbO ₃ Guided-Wave Interferometric Modulators | Leonberger, F.J. | Ferroelectrics, Vol. 50, No. 1-4, 1983, pp. 487-490 |
| 6277 | Surface Photoacoustic Wave Spectroscopy of Adsorbed Molecules | Brueck, S.R.J.
Deutsch, T.F.
Oates, D.E. | Proc. 6th Intl. Conf. Laser Spectroscopy (SICOLS '83), 27 June — 1 July 1983, pp. 298-300 |
| 6289 | Applications of LiNbO ₃ Guided-Wave Interferometric Modulators | Leonberger, F.J. | 29th Intl. Instrumentation Symp., 2-5 May 1983, pp. 247-259 |
| 6307A | Modification of Schottky Diode Characteristics in GaAs by Dry Etching | Pang, S.W.
Lincoln, G.A.
Geis, M.W.
Vera, A. | Proc. IEEE/ Cornell Conf. on High-Speed Semiconductor Devices & Circuits, 15-17 August 1983, pp. 167-176 |
| 6311 | Explicit Optimality Conditions for Fixed-Order Dynamic Compensation | Hyland, D.C.
Bernstein, D.S. | Proc. 22nd IEEE Conf. on Decision & Control, San Antonio, TX, Vol. 1, 14-16 December 1983, pp. 161-165 |
| 6321 | Programmable, Secondary Frequency Standard Based Infrared Synthesizer Using Tunable Lead-Salt Diode Lasers | Freed, C.
Bielinski, J.W.
Lo, W. | SPIE, Vol. 438, <i>Tunable Diode Lasers Development and Spectroscopy Applications</i> , 1983, pp. 119-123 |

Meeting Speeches

MS No.

- | | | | |
|-------|---|--|---|
| 6329A | Resonant Tunneling Through Quantum Wells up to 2.5 THz | Sollner, T.C.L.G.
Goodhue, W.D.
Tannenwald, P.E.
Parker, C.D.
Peck, D.D.
Le, H.Q. | IEEE 8th Intl. Conf. on Infrared and Millimeter Waves, 12-17 December 1983, pp. T5.1-T5.2 |
| 6334 | Quartz Rotary-Table Substrate Holder for Epitaxial Growth Reactor | Hovey, D.L. | Proc. 28th Symp. on the Art of Glassblowing, 13-17 June 1983, pp. 13-20, ADA147044 |
| 6335 | The Application of Multi-channel Signal Processing to Clutter Suppression for a Moving Platform Radar | Shaw, G.A.
McAulay, R.J. | IEEE Spectrum Estimation Workshop, Tampa, FL, 10-11 November 1983, pp. 308-312 |
| 6347 | Calculation of Intrinsic Capacitances of GaAs FETs for Switching Circuits | Gopinath, A.
Rankin, J.B. | Proc. IEEE/Cornell Conf. on High-Speed Semiconductor Devices & Circuits, 15-17 August 1983, pp. 309-316 |
| 6358 | Adaptive Compensation for Atmospheric Turbulence Effects on Optical Propagation | Greenwood, D.P. | NATO AGARD Conf. Proc. No. 346, Spatind, Norway, 4-7 October 1983, pp. 18-1 — 18-10 ADP003897 |
| 6363 | A Systolic Array Processor for Target Detection in Images | Therrien, C.W. | 17th Asilomar Conf. on Circuits, Systems & Computers, 31 October — 2 November 1983, pp. 326-331 |
| 6375 | Comparison of New Analog Device Technologies for Signal Processing | Stern, E. | Proc. of the Ultrasonics Symp., 31 October — 2 November 1983, pp. 129-136 ADA147473 |
| 6378 | Measurement of Electroacoustic Coefficients in LiNbO ₃ and LiTaO ₃ and Application to Signal-Processing Devices | Gottschalk, P.G.
Oates, D.E.
Wright, P.V. | Proc. of the Ultrasonics Symp., 31 October — 2 November 1983, pp. 1091-1095 ADA147595 |

Meeting Speeches

MS No.

6379	Surface-Photoacoustic-Wave Spectroscopy of Thin Films	Oates, D.E. Brueck, S.R.J. Deutsch, T.F.	Proc. of the Ultrasonics Symp., 31 October — 2 November 1983, pp. 695-699 ADA147515
6380	Recent Advances in Solid-State Laser Materials	Moulton, P.F.	Materials Research Society Symp. Proc., Vol. 24, 1984, pp. 393-400
6382	Electromagnetically-Induced Surface Microstructures and Enhanced Field Effects in Laser Processing	Brueck, S.R.J. Ehrlich, D.J. Murphy, D.V. Tsao, J.Y.	Materials Research Society Symp. Proc., Vol. 29, 1984, pp. 295-300 ADA147997
6385	Integration of Multiple Elastic Convolvers into a Communication Signal Processor	Dolat, V.S. Flynn, G.T.	Proc. of the Ultrasonics Symp., 31 October — 2 November 1983, pp. 137-142
6394	Laser Microchemical Processing: Spatial Resolution and Rate Limits of Optical Direct-Writing Techniques	Ehrlich, D.J. Tsao, J.Y.	<i>Microcircuit Engineering '83</i> , Academic Press, London, England, 1983, pp. 429-438
6397	UV Laser-Initiated Deposition of Al ₂ O ₃ Films: the Effect of Surface Irradiation	Deutsch, T.F. Silversmith, D.J. Mountain, R.W.	Materials Research Society Symp. Proc., Vol. 29, 1984, pp. 67-72
6400	Recent Advances in UV Laser Photodeposition	Tsao, J.Y. Ehrlich, D.J.	Materials Research Society Symp. Proc., Vol. 29, 1984, pp. 115-126
6400A	Laser-Chemical Modification of Nucleation Barriers for Area-Selective Thin Film Growth	Tsao, J.Y. Ehrlich, D.J.	J. Cryst. Growth, Vol. 68, No. 1, September 1984, pp. 176-187
6402	Laser Direct Write Technologies as Tools for Gate-Array Development	Silversmith, D.J. Ehrlich, D.J. Tsao, J.Y. Mountain, R.W. Sedlacek, J.H.C.	Materials Research Society Symp. Proc., Vol. 29, 1984, pp. 55-59 ADA147974

Meeting Speeches

MS No.

- | | | | |
|------|---|---|--|
| 6409 | The Role of Oxygen in
Zone-Melting
Recrystallization of
Silicon-on-Insulator Films | Fan, J.C.C.
Tsaur, B-Y.
Chen, C.K.
Dick, J.R.
Kazmerski, L.L. | Materials Research
Society Symp. Proc.,
Vol. 23, 1984,
pp. 477-489 |
| 6411 | Laser Fabrication of
Micron-Size Structures
on CdS | Daneu, V.
Peers, J.H.
Sanchez, A. | Materials Research
Society Symp. Proc.,
Vol. 29, 1984, pp. 133-137
ADA148266 |
| 6412 | A CCD Chip for Parallel
Pulse-Doppler Radar
Processing | Chiang, A.M.
Shaw, G.A. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 44.15.1-44.15.4 |
| 6413 | A Wafer Scale Integration
Systolic Processor for
Connected Word Recognition | Feldman, J.A.
Garverick, S.L.
Rhodes, F.M.
Marrin, J.R. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 25B.4.1-25B.4.3 |
| 6414 | Adaptive Noise Cancellation in
a Fighter Cockpit Environment | Harrison, W.A.
Lim, J.S.
Singer, E. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 18A.4.1-18A.4.4 |
| 6416 | A New Method For Wideband
Sensor Array Processing | Nawab, S.H.
Dowla, F.U.
Lacoss, R.T. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 4.12.1-4.12.4 |
| 6417 | Homomorphic Restoration of
Images Degraded by Light
Cloud Cover | Peli, T.
Quatieri, T.F. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 37.8.1-37.8.4 |

Meeting Speeches

MS No.

- | | | | |
|------|---|---|--|
| 6418 | Cancellation of Local Oscillator Intensity Noise Caused by the Relaxation Oscillation of GaAlAs Lasers with a Dual-Detector Heterodyne Receiver | Abbas, G.L.
Chan, V.W.S.
Yee, S.T.K. | Conf. on Optical Fiber Communication, New Orleans, LA, 23-25 January 1984, p. 34 |
| 6420 | Experiments with Extrapolating Band-Limited Signal | Tsai, M-J.
O'Connor, D.A. | ICASSP '84, IEEE Intl. Conf. on Acoustics, Speech & Signal Process., 19-21 March 1984, pp. 31.9.1-31.9.4 |
| 6422 | Performance Estimates for a Coherent Optical Communication System | Jeromin, L.L.
Chan, V.W.S. | Conf. on Optical Fiber Communication, New Orleans, LA, 23-35 January 1984, p. 60 |
| 6423 | InP Optoelectronic Switches and Their High-Speed Signal-Processing Applications | Cox, C.H. III
Diadiuk, V.
Yao, I.
Leonberger, F.J.
Williamson, R.C. | SPIE, Vol. 439, <i>Picosecond Optoelectronics</i> , San Diego, CA, 24-26 September 1983, pp. 164-168 ADA147023 |
| 6431 | Estimation of All-Pole Parameters from Noise-Corrupted Sequences | McGinn, D.P.
Johnson, D.H. | IEEE ASSP Spectrum Workshop, Tampa, FL, 10-11 November 1983, pp. 108-112 |
| 6433 | Fabrication and Characterization of Ti-Indiffused and Proton Exchange Waveguides in LiNbO ₃ | Becker, R.A. | SPIE, Vol. 460, <i>Processing of Guided Wave Optoelectronic Materials</i> , 1984, pp. 95-100 ADA149327 |
| 6435 | Wide-Bandwidth HgCdTe Photodiode Photomixers at 28 μm | Spears, D.L. | Eighth Intl. Conf. on Infrared & Millimeter Waves, 12-17 December 1983, Conf. Digest, p. T2.8 |

Meeting Speeches

MS No.

- | | | | |
|-------|--|---|--|
| 6438 | An Electroabsorptive CCD Spatial Light Modulator | Kingston, R.H.
Burke, B.E.
Nichols, K.B.
Leonberger, F.J. | SPIE, Vol. 465, <i>Spatial Light Modulators and Applications</i> , 1984, pp. 9-11
ADA147194 |
| 6444 | AlGaAs Shallow-Homojunction Solar Cells for Tandem Applications | Gale, R.P.
Turner, G.W.
Fan, J.C.C.
Chapman, R.L.
Pantano, J.V. | Proc. 17th IEEE Photovoltaic Specialists Conf., 1-4 May 1984, pp. 721-725
ADA147228 |
| 6445 | A CCD Matrix-Matrix Product Parallel Processor | Chiang, A.M.
Mountain, R.W.
Silversmith, D.J.
Felton, B.J. | 1984 IEEE Intl. Solid-State Circuits Conf., Digest of Tech. Papers, 22-24 February 1984, pp. 110-111, & 336 |
| 6447 | A High Stability TWTA for Ground Surveillance Applications | Millman, J.T.
Saia, J.J.
Hayse, C.E. | Proc. 1984 IEEE National Radar Conf., Atlanta, GA, 13-14 March 1984, pp. 110-114 |
| 6449A | A Microwave Phase and Gain Controller with Segmented-Dual-Gate MESFETs in GaAs MMICs | Hwang, Y.C.
Chen, Y.K.
Naster, R.J.
Temme, D.H. | IEEE 1984 Microwave and Millimeter-Wave Monolithic Circuits Symp., Digest of Papers, 29-30 May 1984, pp. 1-5 |
| 6450 | GaAs CLEFT Solar Cells for Space Applications | Fan, J.C.C.
McClelland, R.W.
King, B.D. | Proc. 17th IEEE Photovoltaic Specialists Conf., 1-4 May 1984, pp. 31-35
ADA147192 |
| 6452 | GaAsP Shallow-Homojunction Solar Cells for Tandem Applications | McClelland, R.W.
King, B.D.
Fan, J.C.C.
Chapman, R.L. | Proc. 17th IEEE Photovoltaic Specialists Conf., 1-4 May 1984, pp. 452-454
ADA147321 |

Meeting Speeches

MS No.

- | | | | |
|------|---|---|--|
| 6456 | GaAs/Ge/Si Solar Cells | Tsaur, B-Y.
Fan, J.C.C.
Turner, G.W.
King, B.D.
McClelland, R.W.
Metze, G.M. | Proc. 17th IEEE
Photovoltaic Specialists
Conf., 1-4 May 1984,
pp. 440-444 ADA147226 |
| 6461 | Mutual Coupling in Monopole
Phased Array Antennas | Fenn, A.J.
Willwerth, F.G. | 1984 Intl. Symp. Digest,
Antennas and Propagation,
Vol. II, Boston, MA,
25-28 June 1984, pp. 875-878 |
| 6463 | A Distributed Aeroacoustic
Tracking Algorithm | Tenney, R.R.
Delaney, J.R. | Proc. 1984 American
Control Conf., San Diego,
CA, 6-8 June 1984,
pp. 1440-1450 ADA146978 |
| 6465 | Masked Ion Beam Lithography
Using Stencil Masks | Randall, J.N.
Flanders, D.C.
Economou, N.P. | SPIE, Vol. 471, <i>Electron-
Beam, X-Ray, and Ion-Beam
Techniques for Sub-
micrometer Lithographies III</i> ,
1984, pp. 47-52 |
| 6470 | An Ultra Low Transient GaAs
FET VHF Switch | White, D.W. | 1984 IEEE MTT-S Digest,
29 May — 1 June 1984,
pp. 155-157 |
| 6472 | 100-Mbit/sec 4-ary Frequency
Shift Key Modulation of a
GaAlAs Semiconductor Diode
Laser | Welford, D.
Alexander, S.B. | Conf. on Lasers & Electro-
Optics, Digest of Technical
Papers, 19-22 June
1984, pp. 108-109 |
| 6473 | Compact Dual Frequency
Reflector Antennas for EHF
Mobile Satellite Communication
Terminals | Rotman, W.
Lee, J.C. | 1984 Intl. Symp. Digest,
Antennas and Propagation,
Vol. I, Boston, MA,
25-28 June 1984, pp. 771-773 |
| 6475 | Magnitude-Only Reconstruction
Using a Sinusoidal Speech
Model | McAulay, R.J.
Quatieri, T.F. | ICASSP '84, IEEE Intl.
Conf. on Acoustics,
Speech & Signal Process.,
19-21 March 1984,
pp. 27.6.1-27.6.4 |

Meeting Speeches

MS No.

6483	Rapid Thermal Annealing of Composite TaSi ₂ /n ⁺ Poly-Si Silicide Films	Kwong, D.L. Kwor, R. Tsaur, B-Y. Daneshvar, K.	Materials Research Society Symp. Proc., Vol. 23, 1984, pp. 733-738
6497	Power Dropout Statistics of Nearly Single-Longitudinal-Mode Semiconductor Lasers	Abbas, G.L. Yee, S.T.K.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 212-213
6504	Moment-Method Scattering Solutions to Impedance Boundary Condition Integral Equations	Rogers, J.R.	1984 Intl. Symp. Digest, Antennas and Propagation, Vol. II, Boston, MA, 25-28 June 1984, pp. 347-350
6508	Measurement and/or Processing of Optical Wave Fronts Using Integrated Guided-Wave Optics	Rediker, R.H. Lind, T.A. Burke, B.E.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 196-198
6517	Recent Results in Coherent Optical Communication	Chan, V.W.S.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 108-110
6519	Interconnection and Testing of a Wafer-Scale Circuit with Laser Processing	Chapman, G.H. Anderson, A.H. Konkle, K.H. Mathur, B.P. Raffel, J.I. Soares, A.M.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 222-223
6523	4-Bit 1-G Sample/sec Electrooptic Guided-Wave Analog-to-Digital Converter	Becker, R.A. Woodward, C.E. Johnson, L.M. Leonberger, F.J.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 196-197
6524	Surface and Gas Processes in Photodeposition in Small Zones	Tsao, J.Y. Ehrlich, D.J.	SPIE, Vol. 459, <i>Laser Assisted Deposition, Etching, and Doping</i> , 1984, pp. 2-8

Meeting Speeches

MS No.

6525	Flight Testing of TCAS II with Subject Pilots	Andrews, J.W.	IEE Colloquium on Airborne Collision Avoidance-TCAS, London, UK, 5 March 1984, pp. 3/1-3/4
6526	Development of Surveillance Techniques for TCAS II	Harman, W.H. III	IEE Colloquium on Airborne Collision Avoidance-TCAS, London, UK, 5 March 1984, pp. 2/1-2/4
6527	Progress in Surface Photoacoustic Wave Spectroscopy of Thin Films	Brueck, S.R.J. Deutsch, T.F. Oates, D.E.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 85-86
6528	Broadband Ti:LiNbO ₃ Guided-Wave Lumped-Element and Traveling-Wave Interferometric Modulators	Becker, R.A.	Seventh Topical Mtg. on Integrated and Guided-Wave Optics, Digest of Tech. Papers, 24-26 April 1984, pp. TuA2-1 — TuA2-4
6529	Laser Direct Writing: A Capsule Review of Methods and Applications in Microelectronics	Ehrlich, D.J. Tsao, J.Y.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 200-201
6530	Multiple Waveguide Lens	Haus, H.A. Molter-Orr, L.A. Leonberger, F.J.	Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, pp. 176-179
6536	Temperature Dependence of Quantum-Fluctuation Linewidth Broadening in (GaAl)As Diode Lasers	Harrison, J. Mooradian, A.	Thirteenth Intl. Quantum Electronics Conf., Digest of Technical Papers, 18-21 June 1984, pp. 45-46
6538	Integrated-Optical Channel-Waveguide Frequency Shifter	Johnson, L.M. Becker, R.A. Kingston, R.H.	Seventh Topical Mtg. on Integrated and Guided-Wave Optics, Digest of Tech. Papers, 24-26 April 1984, pp. WD4-1 — WD4-4

Meeting Speeches

MS No.

- | | | | |
|------|---|--|---|
| 6540 | Buried-Heterostructure
Q-Switched Diode Lasers | Tsang, D.Z.
Walpole, J.N.
Liau, Z-L.
Groves, S.H. | SPIE, Vol. 466, <i>Optical
Interfaces for Digital
Circuits and Systems</i> ,
1984, pp. 40-44 |
| 6541 | Electron-Beam Techniques for
Integrated Circuit Testing
and Customization | Shaver, D.C. | IEEE Proc. of the 1984
Custom Integrated
Circuits Conf., Rochester,
NY, 21-23 May 1984,
pp. 606-609 |
| 6542 | High Average Power Mode-
Locked Operation of Co:MgF ₂
and Ni:MgF ₂ Lasers | Johnson, B.C.
Moulton, P.F.
Mooradian, A.
Rosenbluh, M. | Conf. on Lasers &
Electro-Optics, Digest of
Technical Papers, 19-22 June
1984, p. 82 |
| 6543 | Design, Fabrication and
Characterization of Horn
Antennas in Ti-indiffused
LiNbO ₃ Channel Waveguides | Rediker, R.H.
Lind, T.A.
Becker, R.A.
Johnson, L.M. | Seventh Topical Mtg. on
Integrated and Guided-
Wave Optics, Digest of
Tech. Papers, 24-26 April
1984, pp. WC4-1 — WC4-4 |
| 6544 | GaAs Monolithic Frequency
Doublers with Series
Connected Varactor Diodes | Chu, A.
Courtney, W.E.
Mahoney, L.J.
McClelland, R.W.
Atwater, H.A | IEEE 1984 Microwave &
Millimeter Wave
Monolithic Circuits
Symp., Digest of Tech.
Papers, 29-30 May 1984,
pp. 74-77; also published in
1984 IEEE MTT-S Intl.
Microwave Symp. Digest,
29 May — 1 June 1984, pp. 51-54 |
| 6548 | Impedance Boundary Condition
Integral Equations | Heath, G.E. | 1984 Intl. Symp. Digest,
Antennas and Propagation,
Vol. II, Boston, MA,
25-28 June 1984, pp. 697-700 |
| 6553 | A Gallium Arsenide Electro-
optical Interferometric
Modulator | Donnelly, J.P.
DeMeo, N.L., Jr.
Ferrante, G.A.
Nichols, K.B.
O'Donnell, F.J. | Seventh Topical Mtg. on
Integrated and Guided-
Wave Optics, Digest of
Tech. Papers, 24-26 April
1984, pp. ThB3-1 — ThB3-4 |

Meeting Speeches

MS No.

- | | | | |
|------|---|--|--|
| 6556 | Output Characteristics of Lead-Telluride Quantum-Well Diode Lasers | Freed, C.
Bielinski, J.W.
Lo, W.
Partin, D.L. | J. Opt. Soc. Am. B,
Vol. 1, No. 3, June 1984,
pp. 544-545 |
| 6561 | Characterization of Instability in Ti-indiffused LiNbO ₃ Modulators Due to Photorefractive and Non-Optical Sources | Becker, R.A. | Seventh Topical Mtg. on Integrated and Guided-Wave Optics, Digest of Tech. Papers, 24-26 April 1984, pp. WC3-1 — WC3-4 |
| 6562 | Mass-Transported GaInAsP/InP Buried-Heterostructure Lasers and Integrated Mirrors | Liau, Z-L.
Walpole, J.N.
Tsang, D.Z. | Seventh Topical Mtg. on Integrated and Guided-Wave Optics, Digest of Tech. Papers, 24-26 April 1984, pp. TuC5-1 — TuC5-4 |
| 6564 | Reconfiguring Semi-custom ICs Using Lasermicrochemical Techniques | Graber, W.S.
Ehrlich, D.J.
Tsao, J.Y.
Silversmith, D.J.
Sedlacek, J.H.C.
Mountain, R.W. | IEEE Proc. 1984 Custom Integrated Circuits Conf., Rochester, NY, 21-23 May 1984, pp. 453-456 |
| 6574 | High-Speed Integrated Optoelectronic Signal Processing Devices | Leonberger, F.J. | Seventh Topical Mtg. on Integrated and Guided-Wave Optics, Digest of Tech. Papers, 24-26 April 1984, pp. WA1-1 — WA1-3 |
| 6589 | High-Field Electron Capture and Emission in Nitrided Oxides | Terry, F.L.
Wyatt, P.W.
Naiman, M.L.
Mathur, B.P.
Kirk, C.T., Jr.
Senturia, S.D. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, pp. 1971-1972 |
| 6590 | A Simple Method for Sampling In-Phase and Quadrature Components | Rader, C.M.
Sundaramurthy, M. | Proc. of the Microcircuit Applications Conf., 6-8 November 1984, pp. 174-175 |

Meeting Speeches

MS No.

- | | | | |
|------|--|---|---|
| 6628 | GaAs Permeable Base Transistors Fabricated Using Organometallic Chemical Vapor Deposition | Nichols, K.B.
Gale, R.P.
Hollis, M.A.
Lincoln, G.A., Jr.
Bozler, C.O. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, pp. 1968-1970 |
| 6632 | Microwave Oscillations and Optical Effects from Resonant Tunneling Quantum Well Structures | Sollner, T.C.L.G.
Tannenwald, P.E.
Goodhue, W.D.
Peck, D.D.
Le, H.Q. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, p. 1985 |
| 6634 | A Tracking Algorithm for Dense Target Environments | Chang, C-B.
Dunn, K-P.
Youens, L.C. | Proc. 1984 American Control Conf., San Diego, CA, 6-8 June 1984, pp. 613-618 |
| 6635 | Low Frequency Noise in Permeable Base Transistors | Zhu, X.C.
Zhang, X.N.
van der Ziel, A.
Bozler, C.O. | IEEE Trans. Electron Devices, Vol. ED-31, No. 10, October 1984, pp. 1408-1413 |
| 6637 | Lateral Photodetectors on Semi-Insulating InGaAs and InP | Diadiuk, V.
Groves, S.H. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, p. 1973 |
| 6640 | Silicon Permeable Base Transistors | Rathman, D.D.
Vojak, B.A.
Flanders, D.C.
Economou, N.P. | 1984 Intl. (16th) Conf. on Solid State Devices and Materials, 30 August — 1 September 1984, pp. 305-308 |
| 6646 | Optical Analysis of Device Materials: Structures and Processing | Brueck, S.R.J. | Conf. on Lasers & Electro-Optics, Digest of Technical Papers, 19-22 June 1984, p. 200 |
| 6647 | 14-GHz Operation of Q-Switched Diode Lasers | Tsang, D.Z.
Walpole, J.N.
Groves, S.H.
Liau, Z-L. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, pp. 1973-1974 |

Meeting Speeches

MS No.

- | | | | |
|------|---|--|---|
| 6651 | A New High-Efficiency GaAs Solar Cell Structure Using a Heterostructure Back-Surface Field | Gale, R.P.
Fan, J.C.C.
Turner, G.W.
Chapman, R.L. | Proc. 17th IEEE Photovoltaic Specialists Conf., 1-4 May 1984, pp. 1422-1425 ADA147534 |
| 6652 | GaAs MESFETs and AlGaAs Double-Heterostructure Diode Lasers Fabricated on Monolithic GaAs/Si Substrates | Choi, H-K.
Windhorn, T.H.
Tsauro, B-Y.
Metze, G.M.
Turner, G.W.
Fan, J.C.C. | IEEE Trans. Electron Devices, Vol. ED-31, No. 12, December 1984, p. 1988 |
| 6665 | Restructurable VLSI for Real-Time Signal and Data Processing Applications | Sundaramurthy, M. | IEEE 1984 Digital Signal Processing Workshop, 8-10 October 1984, pp. 6.2.1-6.2.2 |
| 6674 | Monolithic Integration of GaAs and Si | Fan, J.C.C. | 1984 Intl. (16th) Conf. on Solid State Devices and Materials, 30 August — 1 September 1984, pp. 115-119 |
| 6737 | Spatial Tracking System for Heterodyne Optical Communication | Swanson, E.A.
Chan, V.W.S. | IEEE Military Commun. Conf., Vol. 2, Conf. Rec., 21-24 October 1984, pp. 253-258 |

AUTHOR INDEX

- Abbas, G.L., MS-6418, MS-6497
 Alexander, S.B., MS-6472
 Anderson, A.H., TR-707, MS-6519
 Anderson, J.C., TR-707
 Andrews, J.W., MS-6525
 Astolfi, D.K., JA-5575
 Athale, R.A., JA-5606
 Atwater, H.A., JA-5527, MS-6544
 Aucoin, R.J., JA-5468
 Ausherman, D.A., JA-5586

 Bachner, F.J., JA-5536
 Becker, R.A., JA-5522, JA-5585, JA-5614,
 JA-5635, JA-5636, MS-6433, MS-6523,
 MS-6528, MS-6538, MS-6543, MS-6561
 Berger, R., TR-681
 Bernstein, D.S., MS-6311
 Bielinski, J.W., MS-6321, MS-6556
 Bowers, C.J., TR-671
 Bozler, C.O., TR-669, MS-6628, MS-6635
 Branz, H.M., JA-5613
 Brueck, S.R.J., MS-5899A, MS-6277,
 MS-6379, MS-6382, MS-6527, MS-6646
 Buhl, D., JA-5573
 Burke, B.E., MS-6438, MS-6508
 Burns, J.A., JA-5534
 Burrows, M.L., JA-5646

 Cabral, S.M., JA-5534
 Calawa, A.R., JA-5561

 Campbell, S.D., JA-5580
 Chan, V.W.S., TR-667, MS-6418, MS-6422,
 MS-6517, MS-6737
 Chang, C-B., TR-694, JA-5297,
 MS-6634
 Chapman, G.H., MS-6519
 Chapman, R.L., JA-5535, JA-5546, MS-6444,
 MS-6452, MS-6651
 Chen, C.K., JA-5535, JA-5612, JA-5622,
 JA-5652, MS-6409
 Chen, Y.K., MS-6449A
 Chiang, A.M., MS-6412, MS-6445
 Chin, G., JA-5573
 Choi, H-K., JA-5599, JA-5656, MS-6652
 Chu, A., MS-6544
 Cockayne, B., JA-5562
 Connors, M.K., JA-5495
 Courtney, W.E., MS-6544
 Cox, C.H. III, JA-5613, MS-6423
 Crouch, K.W., MS-6131A

 Daneshvar, K., MS-6483
 Daneu, V., MS-6411
 Dean, P.J., JA-5562, JA-5654
 Delaney, J.R., MS-6463
 DeMeo, N.L., Jr., JA-5637, MS-6553
 Dervisoglu, B.I., TR-685
 Deutsch, T.F., JA-5653, MS-6277, MS-6379,
 MS-6397, MS-6527
 Diadiuk, V., JA-5601, MS-6423, MS-6637
 Dick, J.R., JA-5622, MS-6409

Author Index

- Dion, A.R., TR-662
- Dionne, G.F., TR-688, JA-5542
- Dolat, V.S., MS-6385
- Domic, A., MS-6131A
- Donnelly, J.P., JA-5536, JA-5570, JA-5637, MS-6443
- Dowla, F.U., MS-6416
- Downey, P.M., JA-5536
- Dudgeon, D.E., TR-705
- Dunn, K-P., TR-686, TR-694, MS-6634
- Eastman, L.F., JA-5543
- Eaves, R.E., JA-5593
- Economou, N.P., MS-6465, MS-6640
- Efremow, N.N., JA-5534
- Ehrlich, D.J., JA-5489, JA-5539, JA-5544, JA-5557, JA-5571, JA-5578, JA-5584, JA-5658, MS-6382, MS-6394, MS-6400, MS-6400A, MS-6402, MS-6524, MS-6529, MS-6564
- Erickson, N.R., JA-5542
- Fan, J.C.C., TR-669, JA-5528, JA-5535, JA-5546, JA-5569, JA-5597, JA-5599, JA-5611, JA-5612, JA-5618, JA-5622, JA-5652, MS-6409, MS-6444, MS-6450, MS-6452, MS-6456, MS-6651, MS-6652, MS-6674
- Feldman, J.A., MS-6413
- Felton, B.J., MS-6445
- Fenn, A.J., MS-6461
- Ferrante, G.A., JA-5637, MS-6553
- Fetterman, H.R., JA-5542, JA-5573
- Fitzgerald, J.F., JA-5542
- Flanders, D.C., JA-5561, MS-6465, MS-6640
- Flynn, G.T., MS-6385
- Forgie, J.W., JA-5488
- Freed, C., JA-5608, MS-6321, MS-6556
- Fujimoto, J.G., JA-5502
- Fukunaga, K., JA-5425
- Gale, R.P., JA-5546, MS-6444, MS-6628, MS-6651
- Garverick, S.L., MS-6413
- Geis, M.W., JA-5527, JA-5535, JA-5561, MS-6307A
- Gilgen, H.H., JA-5532
- Gold, B., TR-671, TR-680
- Goldner, R.B., MS-6115
- Goodhue, W.D., JA-5676, MS-6329A, MS-6632
- Goodman, J.W., JA-5606
- Gopinath, A., MS-6347
- Gottschalk, P.G., MS-6378
- Graber, W.S., JA-5571, MS-6564
- Greenwood, D.P., MS-6358
- Grimbergen, M.N., MS-6115
- Groves, S.H., JA-5514, JA-5538, JA-5601, JA-5654, MS-6540, MS-6637, MS-6647
- Grunthaner, F.J., JA-5574, JA-5700
- Gschwendtner, A.B., MS-5931

Author Index

- Harman, W.H. III, MS-6526
Harney, R.C., MS-5931
Harrison, J., JA-5587, MS-6536
Harrison, W.A., TR-691, MS-6414
Hart, G.W., JA-5613
Haus, H.A., JA-5429, JA-5603, JA-5608,
MS-6530
Hayes, R.E., JA-5597
Hayse, C.E., MS-6447
Heath, G.E., JA-5554, MS-6548
Heath, W.S., JA-5487
Hecht, M.H., JA-5574, JA-5700
Heggstad, H.M., TR-681, JA-5454,
JA-5567
Hodsdon, D.M., MS-5959
Hollis, M.A., MS-6628
Hovey, D.L., JA-5617, MS-6334
Hull, R.J., MS-5931
Hwang, Y.C., MS-6449A
Hyland, D.C., MS-6311

Iseler, G.W., JA-5562, JA-5623

Jao, J.K., JA-5565
Jeffries, A.D., JA-5536
Jeromin, L.L., MS-6187A, MS-6422
Johnson, B.C., JA-5550, MS-6542
Johnson, D.H., MS-6431
Johnson, L.M., JA-5514, JA-5559,
JA-5595, JA-5600, JA-5614, MS-6523,
MS-6538, MS-6543

Jones, H.M., JA-5586
Jones, K.M., JA-5597

Kazmerski, L.L., JA-5622, MS-6409
Kelly, E.J., TR-709
King, B.D., MS-6450, MS-6452, MS-6456
Kingston, R.H., JA-5564, MS-6438, MS-6538
Kirk, C.T., Jr., JA-5468, MS-6589
Kocher, D.G., JA-5399
Kolba, D.P., JA-5593
Konkle, K.H., MS-6519
Kozma, A., JA-5586
Kung, S-Y., JA-5606
Kuphal, E., JA-5654
Kwong, D.L., JA-5620, MS-6483
Kwor, R., JA-5620, MS-6483

Lacoss, R.T., MS-6416
LaFrey, R.R., JA-5580
Lax, B., JA-5543
Le, H.Q., JA-5543, MS-6329A, MS-6632
Lee, J.C., JA-5525, MS-6473
Lenth, W., JA-5553, JA-5607, JA-5627
Leonberger, F.J., JA-5429, JA-5585, JA-5603,
JA-5606, MS-6240, MS-6289, MS-6423,
MS-6438, MS-6523, MS-6530, MS-6574
Lerner, R.M., TR-684
Liau, Z-L., JA-5514, JA-5545, JA-5590,
JA-5601, MS-6540, MS-6562, MS-6647

Author Index

- Lim, J.S., MS-6414
- Lincoln, G.A., Jr., JA-5561, MS-6307A, MS-6628
- Lind, T.A., MS-6508, MS-6543
- Lindley, W.T., JA-5536
- Lippmann, R.P., TR-681
- Lo, W., MS-6321, MS-6556
- Lynch, J.T., TR-671
- MacEwan, W.R., JA-5562
- Mack, M.A., TR-680
- Mahoney, L.J., MS-6544
- Maki, P.A., JA-5543
- Mann, J.R., MS-6413
- Marcus, S., JA-5616
- Marinero, E.E., JA-5544
- Mathur, B.P., MS-6519, MS-6589
- Mavroides, J.G., TR-669
- Mayer, G.J., TR-634
- McAulay, R.J., JA-5356, MS-6335, MS-6475
- McClelland, R.W., TR-669, JA-5561, MS-6450, MS-6452, MS-6456, MS-6544
- McGinn, D.P., MS-6431
- Melngailis, I., JA-5551
- Metze, G.M., JA-5560, JA-5599, JA-5618, JA-5656, MS-6456, MS-6652
- Meyer, S.S., JA-5536
- Millman, J.T., MS-6447
- Molter-Orr, L.A., JA-5429, JA-5603, MS-6530
- Mooradian, A., JA-5547, JA-5550, JA-5551, JA-5587, JA-5644, MS-5264, MS-6536, MS-6542
- Moulton, P.F., JA-5550, MS-5264, MS-6380, MS-6542
- Mountain, R.W., JA-5536, JA-5571, JA-5612, JA-5652, MS-6397, MS-6402, MS-6445, MS-6564
- Muresan, L.V., TR-662
- Murphy, D.V., MS-6382
- Naiman, M.L., JA-5468, JA-5574, JA-5700, MS-6589
- Naster, R.J., MS-6449A
- Nawab, S.H., MS-6416
- Nichols, K.B., JA-5637, MS-6438, MS-6553, MS-6628
- Nitishin, P.M., JA-5570
- Oates, D.E., MS-6277, MS-6378, MS-6379, MS-6527
- O'Connor, D.A., MS-6420
- O'Donnell, F.J., JA-5637, MS-6553
- Osgood, R.M., JA-5532
- Owens, E.B., JA-5570
- Palm, B.J., JA-5528, JA-5611
- Palmateer, S.C., JA-5543
- Pang, S.W., JA-5549, MS-6307A
- Pantano, J.V., JA-5546, MS-6444

Author Index

Parker, C.D., JA-5542, MS-6329A

Partin, D.L., MS-6556

Paul, D.B., TR-676

Paul, W., JA-5538

Pease, R.F.W., JA-5544

Peck, D.D., JA-5573, JA-5676, MS-6329A,
MS-6632

Peers, J.H., MS-6411

Peli, E., JA-5464

Peli, T., JA-5464, MS-6417

Petuchowski, S., JA-5573

Podlesnik, D.V., JA-5532

Poggio, E.C., JA-5586

Polasko, K.J., JA-5544

Pratt, G.W., JA-5559

Quatieri, T.F., TR-705, MS-6115,
MS-6417, MS-6475

Rader, C.M., JA-5526, MS-6590

Raffel, J.I., MS-6519

Randall, J.N., MS-6465

Randall, P.M.S., TR-618

Rankin, J.B., MS-6347

Rathman, D.D., JA-5534, JA-5575,
JA-5653, MS-6640

Rediker, R.H., JA-5551, MS-6508,
MS-6543

Rhodes, F.M., MS-6413

Rogers, J.R., MS-6504

Rosenbluh, M., MS-6542

Rotman, W., JA-5476, MS-6473

Ryan, J.L., JA-5570

Saia, J.J., MS-6447

Salerno, J.P., TR-669

Sanchez, A., JA-5532, MS-6411

Schechter, H., TR-683

Schwab, L.M., MS-5903

Sedlacek, J.H.C., JA-5571, MS-6402,
MS-6564

Senturia, S.D., JA-5468, MS-6589

Shapiro, J.H., MS-6232

Shaver, D.C., JA-5537, MS-6541

Shaw, G.A., MS-6335, MS-6412

Sheldon, P., JA-5597

Silversmith, D.J., JA-5536, JA-5571,
MS-6397, MS-6402, MS-6445, MS-6564

Simmons, A.J., MS-5903

Singer, E., TR-712, MS-6414

Skolnick, M.S., JA-5562, JA-5654

Smith, H.I., JA-5527

Smith, M.L., TR-699

Soares, A.M., MS-6519

Sollner, T.C.L.G., JA-5676, MS-6329A,
MS-6632

SooHoo, K.L., JA-5608

Sorvari, J.M., TR-701

Southard, J.R., MS-6131A

Author Index

- Spears, D.L., MS-5929, MS-6435
- Stansfield, S.A., TR-618
- Stern, E., MS-6375
- Stern, L.A., JA-5575
- Sundaramurthy, M., MS-6590, MS-6665
- Swanson, E.A., MS-6737
- Tabaczynski, J.A., JA-5297
- Taff, L.G., TR-618, JA-5452, JA-5602
- Tannenwald, P.E., JA-5676, MS-6329A, MS-6632
- Temme, D.H., MS-6449A
- Tenney, R.R., MS-6463
- Terry, F.L., JA-5468, MS-6589
- Therrien, C.W., TR-705, JA-5425, MS-6363
- Thomas, J.E., JA-5608
- Thompson, C.V., JA-5527
- Tierney, J., TR-671, TR-683
- Tsai, M-J., TR-689, MS-6420
- Tsang, D.Z., JA-5545, JA-5590, JA-5601, MS-6540, MS-6562, MS-6647
- Tsao, J.Y., JA-5489, JA-5539, JA-5544, JA-5557, JA-5571, JA-5578, JA-5584, MS-6382, MS-6394, MS-6400, MS-6400A, MS-6402, MS-6524, MS-6529, MS-6564
- Tsaur, B-Y., JA-5535, JA-5560, JA-5582, JA-5597, JA-5599, JA-5612, JA-5618, JA-5620, JA-5622, JA-5652, JA-5656, MS-6409, MS-6456, MS-6483, MS-6652
- Turner, G.W., JA-5495, JA-5546, JA-5599, JA-5612, MS-6444, MS-6456, MS-6651, MS-6652
- van der Ziel, A., MS-6635
- Van Hove, P., TR-667, MS-6198A
- Vasquez, R.P., JA-5574
- Vera, A., MS-6307A
- Vohl, P., TR-669
- Vojak, B.A., JA-5534, JA-5561, JA-5575, MS-6640
- Walker, J.L., JA-5586
- Walpole, J.N., JA-5545, JA-5590, JA-5601, MS-6540, MS-6562, MS-6647
- Weiner, S.D., TR-677
- Weinstein, C.J., JA-5488
- Weiss, R.W., JA-5536
- Welford, D., MS-6472
- White, D.W., MS-6470
- White, F.M., TR-654
- Williamson, R.C., JA-5585, MS-6423
- Willwerth, F.G., MS-6461
- Windhorn, T.H., JA-5618, MS-6652
- Withers, R.S., JA-5465, MS-6233A
- Woodhouse, J.D., JA-5570, JA-5582
- Woodward, C.E., JA-5585, MS-6523
- Wright, P.V., MS-6233A, MS-6378
- Wyatt, P.W., JA-5468, MS-6589

Author Index

Yao, I., MS-6423

Yap, D., JA-5559, JA-5595, JA-5600

Yee, S.T.K., JA-5502, MS-6418, MS-6497

Youens, L.C., MS-6634

Zhang, X.N., MS-6635

Zhu, X.C., MS-6635

SUBJECT INDEX

- A/D CONVERTER
JA-5585, MS-6240, MS-6289, MS-6574
- ABSORPTION
JA-5608
- ABSORPTION SPECTRA
MS-6277, MS-6379
- ACCEPTANCE TESTS
TR-683
- ACOUSTIC NOISE
TR-683
- ACOUSTIC SENSORS
MS-6463
- ACOUSTIC TRACKING
MS-6416
- ACOUSTIC WAVES
JA-5465
- ADAPTIVE FILTERS
MS-6417
- ADAPTIVE IMAGE ENHANCEMENT
JA-5464
- ADAPTIVE NOISE
TR-691, MS-6414
- ADSORBED MOLECULES
MS-6277
- ADSORPTION
JA-5584
- AEROACOUSTICS
MS-6463
- AID (SEE AIRBORNE INTELLIGENT
DISPLAY)
- AIR ROUTE SURVEILLANCE RADAR
MS-6525
- AIR-TO-AIR
MS-6526
- AIR-TO-GROUND
JA-5586
- AIRBORNE
TR-701
- AIRBORNE INTELLIGENT DISPLAY
MS-6525
- AIRCRAFT
JA-5580
- AlGaAs (SEE ALUMINUM GALLIUM
ARSENIDE)
- ALGORITHMS
TR-667, TR-686, TR-689, TR-691,
TR-699, MS-6431, MS-6634
- ALL-POLE MODELING
MS-6431
- ALUMINUM
JA-5571, JA-5578
- ALUMINUM ALLOYS
MS-6402
- ALUMINUM GALLIUM ARSENIDE
JA-5543, JA-5546, JA-5560, JA-5618,
MS-6444, MS-6652, MS-6674
- ALUMINUM OXIDE
MS-6380, MS-6397
- AMBIGUITY RESOLUTION
MS-6232, MS-6634
- AMORPHOUS SILICON HYDRIDE
JA-5528
- AMORPHOUS SUBSTRATES
JA-5570
- AMORPHOUS-CRYSTALLINE
TANDEM CELL
JA-5528
- AMPLITUDE
JA-5565, JA-5603, JA-5607

Subject Index

AMPLITUDE CALIBRATION
MS-6553

ANALOG SIGNAL PROCESSING
MS-6233A, MS-6375

ANALOG-TO-DIGITAL CONVERSION
MS-6523

ANALYSIS
TR-667, JA-5476

ANGLE OF ARRIVAL
TR-654

ANGLES ONLY DATA
TR-618

ANGULAR VELOCITY
TR-618

ANISOTROPY
TR-688, JA-5549

ANNEALING
JA-5570, JA-5574, JA-5582

ANODIC OXIDATION
JA-5495, JA-5546

ANOMALIES
MS-6232

ANTENNA BEAMS
JA-5593

ANTENNAS
TR-662

APLANATIC ZONED LENS
JA-5476

ARCHITECTURE
TR-712

AREA DEFENSE
TR-677

ARGON
MS-6307A, MS-6411

ARGON FLUORIDE LASER
JA-5653, MS-6397

ARPANET
JA-5488

ARRAY PROCESSING
MS-6416

ARSENIC
JA-5582

ARTIFICIAL SATELLITES
TR-618, JA-5602

ASTEROID SEARCH
JA-5452

ASTEROIDS
TR-618, JA-5452

ASTRONOMICAL REFRACTION
TR-701

ASTRONOMY
JA-5573, JA-5602

ATMOSPHERE
TR-686

ATMOSPHERIC MODELS
TR-686

ATMOSPHERIC REFRACTION
TR-686, TR-701

ATMOSPHERIC TURBULENCE
MS-6358

ATTENUATION
MS-5903

AUDITORY MODEL
TR-707

AUGER ELECTRON SPECTROSCOPY
MS-6483

AUTOCORRELATION
MS-6431

Subject Index

AUTOMATIC FOCUSING
JA-5399

AUTOVON
TR-681

AVALANCHE PHOTODETECTORS
MS-6187A

AVALANCHE PHOTODIODES
JA-5644, MS-6523

AVIONICS
JA-5580

BACK-SURFACE FIELD
MS-6651

BACKGROUND NOISE
MS-6414

BACKWARD-WAVE OSCILLATOR
JA-5542

BALLISTIC KALMAN FILTER
TR-699

BALLISTIC MISSILE DEFENSE
TR-677

BALLISTIC TRAJECTORY
TR-699

BAND LIMITED COMMUNICATION
MS-6420, MS-6590

BAND STRUCTURE
JA-5538

BANDGAP
JA-5569

BANDWIDTH
JA-5635

BANDWIDTH LIMITATIONS
TR-681

BANDWIDTH MEASUREMENTS
MS-6590

BARRIERS
MS-6329A

BATTLEFIELD SURVEILLANCE
MS-6447

BAYES-OPTIMAL ESTIMATION
TR-654

BEAM SCANNING
JA-5578

BEAM SPLITTING
MS-6418

BEAM SPREADING
MS-6358

BENDS
JA-5514, JA-5600

BICRYSTAL
TR-669

BINARY STARS
JA-5602

BIPOLAR TECHNOLOGY
JA-5652

BIPOLAR TRANSISTORS
JA-5582

BLOCK CODES
MS-6187A

BODIES OF REVOLUTION
TR-709

BOLOMETERS
JA-5536

BONDING
TR-669

BOOLEAN FUNCTIONS
MS-6131A

BORON
JA-5582

Subject Index

BRANCHING

JA-5514, JA-5600

BROADBAND

JA-5522, JA-5559, MS-6528

BSF (SEE BACK-SURFACE FIELD)

BURIED CHANNEL CHARGE-COUPLED DEVICE

MS-6438

BURIED HETEROSTRUCTURE

JA-5514, JA-5545, JA-5590, JA-5601,
MS-6540, MS-6562

C-BAND

MS-6447

C-PROGRAMMING LANGUAGE

JA-5487

C A CODE RECEIVER

JA-5580

CADMIUM SULFIDE

JA-5611, MS-6411

CAPACITANCE

MS-6347

CARBON DIOXIDE LASERS

JA-5551, JA-5578, JA-5608, JA-5616,
MS-5931, MS-6321

CARCINOTRONS

JA-5542

CARRIER CONCENTRATIONS

TR-669

CATHODOLUMINESCENCE

TR-669

CATION

TR-688

CCD (SEE CHARGE-COUPLED DEVICES)

CCD CORRELATOR

MS-6574

CCS (SEE COMMON-CHANNEL SIGNALING)

CELESTIAL MECHANICS

JA-5602

CHANNEL ERROR

TR-683

CHANNEL OPERATION

JA-5570

CHANNEL VOCODER

TR-671, TR-707

CHANNEL WAVEGUIDE

JA-5636

CHANNELIZATION SYSTEMS

MS-6543

CHARGE TRANSFER FUNCTIONS

JA-5564

CHARGE-COUPLED DEVICES

JA-5564, MS-6375, MS-6412, MS-6438,
MS-6445, MS-6508

CHARGED PARTICLES

JA-5554

CHEMICAL ETCHING

JA-5532, JA-5590, MS-6307A

CHEMICAL LASERS

JA-5550

CHEMICAL STRUCTURE

JA-5574

CHEMICAL VAPOR DEPOSITION

JA-5468, JA-5489, JA-5560, JA-5578,
JA-5617, JA-5653, MS-6397, MS-6400,
MS-6400A, MS-6402, MS-6452,
MS-6628, MS-6674

CHIPS

JA-5606, MS-6131A

Subject Index

CIRCUIT BOARDS

MS-6385

CIRCUIT SWITCHED NETWORK

TR-681, JA-5567

CLEAVAGE LATERAL EPITAXIAL FILM TRANSFER

MS-6450

CLEFT (SEE CLEAVAGE LATERAL EPITAXIAL FILM TRANSFER)

CLIMATOLOGY

MS-5903

CLOCK DISTRIBUTION

JA-5606

CLUTTER

JA-5565

CLUTTER SUPPRESSION

MS-6335

CMOS

JA-5571, JA-5612, JA-5652,
MS-6131A, MS-6402

COATINGS

JA-5553

COBALT

TR-688, JA-5550, MS-6542

COBALT ANISOTROPY AND RELAXATION

TR-688

COBALT MAGNESIUM FLUORIDE LASER

JA-5550, MS-5264, MS-6380,
MS-6542

COCKPIT

MS-6414

CODED SYSTEM

MS-6187A

CODING

MS-6475

COHERENT APPLICATIONS

MS-6438

COHERENT COUPLING

JA-5595

COHERENT INFRARED RADAR

MS-5931

COHERENT LASERS

JA-5603, MS-6232

COHERENT OPTICAL COMMUNI- CATION SYSTEMS

MS-6187A, MS-6418, MS-6422, MS-6517

COLLISION AVOIDANCE

MS-6526

COMMON-CHANNEL SIGNALING

TR-681

COMMUNICATION SATELLITES

MS-5903

COMMUNICATIONS

TR-681, JA-5646, MS-6385

COMPOSITE TERRAIN

JA-5565

COMPUTER AIDED DESIGN

JA-5617

COMPUTER ANALYSIS

JA-5528, JA-5611

COMPUTER MODEL

MS-5903

CONNECTED WORD RECOGNITION

MS-6413

CONTAMINATION

JA-5549

CONTINUOUS WAVE LASERS

JA-5429, MS-5264, MS-6411

Subject Index

CONTRAST MANIPULATION

JA-5464

CONTRAST SENSITIVITY

JA-5464

CONTROL LOGIC

MS-6526

CONTROL THEORY

MS-6311

CONVERSION EFFICIENCIES

JA-5528, JA-5546, JA-5611, MS-6538

CORRELATION

JA-5564

COST EFFECTIVENESS

JA-5528

COSTS

JA-5611

COUPLED MODE ANALYSIS

JA-5614

COUPLING

JA-5600

COVARIANCE MATRIX

JA-5425, MS-6363

CRAMER-RAO BOUND

TR-654, TR-694, JA-5297, MS-6232

CREW RESPONSE

MS-6525

CRYSTAL DEFECTS

JA-5534

CRYSTALLIZATION

JA-5570

CRYSTALLOGRAPHY

JA-5527

CRYSTALS

JA-5623, MS-6380

CUEING

MS-6363

CURRENTS

JA-5607, JA-5676

CUSTOMIZATION

JA-5537, MS-6541

CVD (SEE CHEMICAL VAPOR DEPOSITION)

CW LASERS (SEE CONTINUOUS WAVE LASERS)

DAMAGE

JA-5549, JA-5570

DATA ACQUISITION SYSTEMS

JA-5586

DATA COMMUNICATION

JA-5567

DATA PROCESSING

JA-5586

DEEP LEVEL TRANSIENT SPECTROSCOPY

TR-669

DEEP ULTRAVIOLET

JA-5544

DEFENSE SWITCHED NETWORK

TR-681

DEFENSE SYSTEMS

TR-677

DEFLECTORS

JA-5617

DEGRADATION

MS-6402

DENSE TARGET ENVIRONMENT

JA-5297, MS-6634

Subject Index

- DENSITY
JA-5465
- DEPOSITION
JA-5534, MS-6564
- DESIGN
TR-667, MS-6543
- DETECTION
TR-634
- DEVELOPMENT
JA-5551
- DEVICE FABRICATION
JA-5549, MS-6646
- DFT (SEE DISCRETE FOURIER
TRANSFORM)
- DIAGNOSTIC RHYME TESTING
TR-676
- DIAGRAMMATIC DENSITY MATRIX
PERTURBATION
JA-5502
- DIAL (SEE DIFFERENTIAL
ABSORPTION LASER RADAR)
- DIAMOND-LIKE CARBON COATING
MS-5899A
- DIELECTRIC LENS ANTENNA
JA-5476
- DIELECTRICS
JA-5468
- DIFFERENTIAL ABSORPTION LASER
RADAR
JA-5616
- DIGITAL COMMUNICATIONS
JA-5454
- DIGITAL FILTERS
JA-5526, MS-6590
- DIGITAL INTEGRATED CIRCUITS
TR-685
- DIGITAL INTERFACE
TR-676
- DIGITAL PROCESSING
MS-6412
- DIGITAL RADIO
MS-6463
- DIGITAL SIGNAL PROCESSING
TR-712, JA-5526, MS-6375, MS-6665
- DIGITAL SPEECH
TR-683
- DIGITAL VOICE COMMUNICATION
TR-671, JA-5488
- DIODE LASERS
JA-5587, JA-5601, JA-5607, JA-5618,
JA-5627, MS-6472, MS-6536, MS-6540,
MS-6556, MS-6647, MS-6652, MS-6674
- DIRECT DETECTION
MS-6277
- DIRECT DETECTORS
MS-5929, MS-6187A
- DIRECT WRITING
JA-5571, MS-6529
- DIRECT-WRITE LASER PROCESSING
JA-5489, JA-5557, MS-6394, MS-6402
- DISCRETE BANDS
TR-669
- DISCRETE FOURIER TRANSFORM
TR-689, TR-707, MS-6412, MS-6420
- DISLOCATIONS
JA-5623, MS-6456
- DISPLACED PHASE CENTER ANTENNA
MS-6335
- DISTORTION
MS-6414
- DISTRIBUTED ESTIMATION THEORY
MS-6463

Subject Index

DISTRIBUTED SENSOR NETWORK
MS-6463

DLTS (SEE DEEP LEVEL TRANSIENT
SPECTROSCOPY)

DONORS
JA-5562, JA-5654

DOPED CRYSTAL
JA-5623

DOPING
JA-5465, JA-5539

DOPPLER FILTERING
MS-6412

DOPPLER FREQUENCY
JA-5586

DOPPLER MEASUREMENTS
JA-5586

DOPPLER RADAR
MS-5931, MS-6412

DOUBLE HETEROSTRUCTURE
JA-5618, MS-6652, MS-6674

DPCA (SEE DISPLACED PHASE
CENTER ANTENNA)

DRT (SEE DIAGNOSTIC RHYME
TESTING)

DRY ETCHING
JA-5549, MS-6307A, MS-6411

DSN (SEE DISTRIBUTED SENSOR
NETWORK)

DTW (SEE DYNAMIC TIME WARPING)

DUAL FREQUENCY
JA-5525

DUAL GATE
MS-6449A

DYE LASERS
JA-5627

DYNAMIC TIME WARPING
MS-6413

E REGION
TR-709

E-BEAM EVAPORATION
JA-5599

E-PLANE
JA-5525

EARTH APPROACHING ASTEROID
JA-5452

EDGE BONDED TRANSDUCERS
MS-6379

EFFECTIVE MASS THEORY
JA-5623

EFIE (SEE ELECTRIC FIELD INTEGRAL
EQUATION)

EHF (SEE EXTREMELY HIGH
FREQUENCY)

ELASTIC CONVOLVER
MS-6385

ELECTRIC FIELD INTEGRAL
EQUATION
MS-6504, MS-6548

ELECTRIC FIELDS
JA-5554

ELECTROABSORPTION
JA-5564, MS-6438

ELECTROACOUSTICS
MS-6378

ELECTROMAGNETIC EFFECTS
MS-6382

ELECTROMAGNETIC SCATTERING
TR-662, MS-6548

Subject Index

ELECTROMAGNETIC WAVES
TR-709

ELECTRON BEAMS
JA-5537, JA-5539, MS-6541

ELECTRON CAPTURE
MS-6589

ELECTRON DEVICES
JA-5465

ELECTRON DIFFRACTION
JA-5560, JA-5597

ELECTRON EMISSION
MS-6589

ELECTRON IRRADIATION
JA-5612

ELECTRON MICROSCOPY
JA-5532

ELECTRON NUMBER FLUCTUATIONS
JA-5587

ELECTRONIC ABSORPTION SPECTRA
MS-6527

ELECTRONIC PROPERTIES
TR-669

ELECTROOPTIC SWITCHES
JA-5616

ELECTROOPTICAL
TR-634, JA-5522

ELECTROOPTICAL DEVICES
JA-5522, JA-5532, JA-5570, JA-5635,
MS-6523, MS-6553

ELECTROOPTICS
JA-5606

ELECTROSTATICS
TR-688

ELLIPSO METRIC STUDIES
MS-6397

ELLIPTIC
JA-5617

ENERGY
TR-634

ENERGY GAP
JA-5528, JA-5569

ENERGY STORAGE
TR-684

ENHANCEMENT
MS-6382

EPITAXIAL GROWTH
TR-669, JA-5570, MS-6334

EPITAXIAL LAYER
JA-5546, JA-5560, JA-5652

EPROM
JA-5537

EQUATIONS
TR-684, TR-694, JA-5543

ERROR ANALYSIS
MS-6420

ERROR PROBABILITY
TR-654

ERRORS
TR-686

ESTIMATION TECHNIQUES
TR-654

ESTIMATION THEORY
TR-705

ETALONS
JA-5616

ETCHING
JA-5514, JA-5549

EXCIMER LASER
JA-5544, JA-5653

Subject Index

EXCITED STATES

JA-5603

EXCITON STATES

JA-5543

EXECUTIVE ROUTINES

JA-5487

EXHAUSTIVE BIT PATTERNS

TR-685

EXPERIMENTAL DEVICE

JA-5575

EXPERIMENTAL SYSTEM

JA-5580

EXTRAPOLATION

MS-6420

EXTREMELY HIGH FREQUENCY

JA-5476, JA-5593, JA-5646, MS-5903,
MS-6473

F-15

TR-683

FABRICATION

JA-5539, JA-5545, JA-5561, JA-5599,
JA-5611, JA-5612, JA-5618, MS-6433,
MS-6456, MS-6543, MS-6640, MS-6674

FABRY-PEROT CAVITY LASER

MS-6329A

FACEMASK

MS-6414

FADING

TR-671

FAR FIELD

MS-6543

FAST FOURIER TRANSFORM

MS-6412

FATIGUE

TR-684

FEDERAL AVIATION ADMINISTRATION

JA-5580, MS-6525

FEED HORN

JA-5525

FEEDBACK

TR-685

FERRITES

TR-688

FET (SEE FIELD EFFECT TRANSISTORS)

FIBER OPTICS

JA-5545, JA-5635, MS-6538

FIBER REINFORCEMENT

TR-684

FIELD EFFECT TRANSISTORS

JA-5465, JA-5656, MS-6347, MS-6470

FIELD INTENSITY

JA-5595

FIGHTERS

MS-6414

FILM

MS-6409

FILM DEPOSITION

MS-6397

FILTER BANK

TR-707

FILTER DESIGN

JA-5297

FILTERING

TR-694, MS-6431

FILTERS

TR-691, MS-6233A

FIREPOND

MS-5931

Subject Index

FIXED OBJECT
JA-5452

FIXED-ORDER COMPENSATION
MS-6311

FLICKER NOISE
MS-6635

FLIGHT TESTING
JA-5580, MS-6525

FLOATING GATE FET
JA-5537

FLUCTUATIONS
MS-6536

FLUORIDES
MS-6380

FLYWHEEL FORMULAS
TR-684

FLYWHEELS
TR-684

FM TRANSCEIVER
TR-676

FOCUS SENSOR
JA-5399

FOCUSED BEAM
JA-5399

FOUCAULT TEST
JA-5399

FOURIER TRANSFORM
JA-5564, MS-6115, MS-6420, MS-6438

FREE ELECTRONS
JA-5543

FREQUENCY DOUBLING
MS-6544

FREQUENCY ESTIMATOR
TR-689

FREQUENCY MODULATION
MS-6289

FREQUENCY SHIFTING
MS-6422, MS-6538

FSK
MS-6422, MS-6447, MS-6472

GaAs (SEE GALLIUM ARSENIDE)

GAIN
JA-5627, MS-6449A

GaInAsP/InP LASERS
JA-5545, JA-5551, MS-6562

GALLIUM ALUMINUM ARSENIDE
JA-5546, JA-5553, JA-5587, MS-6329A,
MS-6444, MS-6450, MS-6472, MS-6536,
MS-6562

GALLIUM ALUMINUM ARSENIDE
LASERS
JA-5547, JA-5627, MS-6497, MS-6517,
MS-6523

GALLIUM ARSENIDE
TR-669, JA-5465, JA-5495, JA-5532,
JA-5543, JA-5549, JA-5560, JA-5561,
JA-5562, JA-5564, JA-5585, JA-5597,
JA-5599, JA-5637, JA-5644, MS-6307A,
MS-6329A, MS-6347, MS-6438,
MS-6449A, MS-6452, MS-6456,
MS-6470, MS-6544, MS-6553, MS-6628,
MS-6635, MS-6651, MS-6652

GALLIUM INDIUM ARSENIDE
PHOSPHIDE
JA-5514, JA-5590

GARNETS
MS-6380

GAS PHASE PHOTOCHEMISTRY
MS-6400

Subject Index

GAS PHASE PHOTOLYSIS
MS-6524

GATE ARRAY
JA-5571, MS-6402, MS-6564

GATE INSULATORS
MS-6589

GAUSS METHOD
JA-5602

GAUSS-GIBBS
TR-618

GAUSSIAN NOISE
TR-654

GAUSSIAN PROCESSES
JA-5425

GAUSSIAN SIGNALS
TR-654

GENERAL AVIATION
JA-5580

GENERATION-RECOMBINATION NOISE
MS-6635

GEOSYNCHRONOUS SATELLITES
JA-5476

GERMANIUM
JA-5538, JA-5544, JA-5560, JA-5597,
JA-5599, MS-6456, MS-6674

GERMANIUM/SILICON
MS-6456

GLASS
JA-5617

GLASS FIBERS
TR-684

GLASSBLOWER
JA-5617

GLOBAL POSITIONING
JA-5580

GRAIN BOUNDARIES
TR-669

GRAPHITE HEATERS
JA-5535, JA-5622, MS-6409

GRATINGS
JA-5532, JA-5534, JA-5561, MS-6378

GREEN'S FUNCTION
TR-709, JA-5554

GRIDS
MS-6465

GROUND SURVEILLANCE
MS-6447

GROUND-BASED
TR-618, JA-5565

GROUND-TO-AIR
JA-5586

GROUP III-V
MS-6553

GROWTH
JA-5468, JA-5597, JA-5623

GUIDED WAVE
JA-5522, JA-5585, MS-6240, MS-6289,
MS-6438, MS-6528, MS-6574

GUIDED WAVE OPTICS
JA-5637, MS-6508, MS-6523, MS-6561

H-FIELD
TR-709

HALIDES
JA-5544

HALL EFFECT
JA-5570

HETERODYNE DETECTION
JA-5573, MS-5929, MS-6737

Subject Index

HETERODYNE LASER RADAR
MS-6737

HETERODYNE RADIOMETRY
JA-5542, JA-5573

HETERODYNE RECEPTION
MS-6418

HETERODYNE SPECTROSCOPY
JA-5607, JA-5608

HETEROSTRUCTURE
JA-5543, MS-6651

HETEROSTRUCTURE LASERS
JA-5590

HgCdTe LASERS (SEE MERCURY
CADMIUM TELLURIDE LASERS)

HIGH EFFICIENCY
JA-5569, MS-6651

HIGH FREQUENCY
TR-671, JA-5607, MS-6329A, MS-6635,
MS-6640

HIGH GAIN
JA-5476, JA-5593

HIGH POWER
TR-688

HIGH POWER LASER
MS-6542

HIGH REFLECTIVITY
JA-5553

HIGH RESOLUTION
JA-5542

HIGH SPEED
JA-5585, JA-5601, JA-5637, MS-6423,
MS-6540, MS-6574, MS-6640, MS-6665

HISTORY
JA-5551

HOLOGRAPHY
MS-6378

HOMOMORPHIC FILTERING
MS-6417

HORN ANTENNAS
MS-6543

HYBRID JUNCTION
MS-6418

HYSTERESIS
TR-688

IEEE-488 STD BUS
MS-5959

IMAGE CLASSIFICATION
TR-705

IMAGE DEGRADATION
MS-6417

IMAGE ENHANCEMENT
JA-5464

IMAGE PROCESSING
TR-634, JA-5464

IMAGE SEGMENTATION
TR-705

IMPEDANCE
JA-5676, MS-6347

IMPEDANCE BOUNDARY CONDITIONS
MS-6504, MS-6548

INDIUM GALLIUM ARSENIDE
MS-6637

INDIUM PHOSPHIDE
JA-5562, JA-5570, JA-5623, JA-5654,
MS-6334, MS-6423, MS-6637

INFRARED DETECTORS
MS-5929

INFRARED RADAR
MS-5931

Subject Index

INFRARED REGION

JA-5550

INFRARED SPECTRUM

JA-5468

INITIAL ORBIT

JA-5602

IN-PHASE COMPONENTS

JA-5526

INSTABILITY

MS-6561

INSTRUMENTATION

JA-5489

INTEGRAL EQUATIONS

TR-709, MS-6504, MS-6548

INTEGRALS

JA-5554

INTEGRATED CIRCUITS

JA-5536, JA-5537, JA-5570, JA-5571,
JA-5599, MS-6131A, MS-6409, MS-6519,
MS-6541, MS-6564, MS-6640, MS-6665

INTEGRATED OPTICS

JA-5429, JA-5514, MS-6289, MS-6543,
MS-6562, MS-6574

INTEGRATION

MS-6385

INTERCONNECTIONS

JA-5606, MS-6402, MS-6519

INTERFERENCE SUPPRESSORS

MS-6335

INTERFEROMETERS

JA-5429, JA-5635, JA-5636, JA-5637,
MS-5264, MS-6433, MS-6553

INTERFEROMETRY

JA-5514, MS-6240, MS-6289, MS-6528

INTERNETWORK

JA-5567

INTERPOLATION

TR-689

INTERSATELLITE LINK

TR-667, MS-6472

ION BEAM ETCHED

JA-5549, MS-6307A

ION BEAMS

MS-6465

ION IMPLANTATION

JA-5536, JA-5570, JA-5582

IONIZATION

JA-5623

ITERATIVE ALGORITHMS

MS-6634

ITERATIVE PROCESSING

MS-6115, MS-6417

JTIDS SPEECH PROCESSING

TR-683

K-BAND

JA-5525

K-DISTRIBUTION

JA-5565

Ka-BAND

MS-6544

KALMAN FILTER

TR-699, JA-5297

KEY DEVICE

JA-5575

KINETIC PROCESSES

MS-6524

KREMS

TR-699

Subject Index

KRONECKER DELTA
JA-5425

LANGMUIR-HINSHELWOOD
MECHANISM
JA-5584

LAPLACE-TAFF
TR-618

LAPLACIAN INITIAL ORBIT
DEFINITION SCHEME
JA-5602

LASER ACTIVATED DEPOSITION
JA-5539

LASER APPLICATIONS
JA-5551, JA-5658, MS-6519, MS-6529

LASER BEAMS
JA-5578, MS-6400

LASER COMMUNICATIONS
TR-667

LASER CRYSTALS
MS-5264

LASER DIODES
JA-5553, JA-5603, MS-6530

LASER DOPING
JA-5489

LASER ETCHING
JA-5489, MS-6411

LASER FABRICATION
MS-6411

LASER IRRADIATION
MS-6397

LASER MATERIALS
MS-6380

LASER MICROCHEMISTRY
JA-5539, JA-5557, JA-5571, MS-6394,
MS-6564

LASER PROCESSING
MS-6382

LASER PULSES
JA-5644

LASER RADIATION
JA-5653

LASER RESONATOR PARAMETERS
JA-5489

LASER WRITING
MS-6564

LASER-CHEMICAL MODIFICATION
MS-6400A

LASERS
JA-5547, JA-5551, JA-5658, MS-6402,
MS-6411, MS-6529, MS-6564

LATERAL EPITAXIAL GROWTH
TR-669

LATERAL OVERGROWTH
TR-669

LATTICES
TR-688

LAYERED DEFENSE SYSTEM
TR-677

LEAD TELLURIDE
MS-6556

LEAD-SALT
MS-6321

LEAKAGE
TR-677

LEAST MEAN SQUARE
TR-691

LEAST SQUARES
MS-6431

LEC METHOD (SEE LIQUID ENCAPSU-
LATED CZOCHRALSKI METHOD)

Subject Index

LENS ANTENNAS

JA-5476

LIDAR

JA-5551, MS-5929

LIGHT CLOUD COVER

MS-6417

LIKELIHOOD FUNCTION

TR-689

LIMP FLYWHEEL

TR-684

LINCOLN BOOLEAN SYNTHESIZER

MS-6131A

LINEAR PREDICTION

TR-705, JA-5425, MS-6335, MS-6363

LINEAR PREDICTIVE CODING

JA-5356

LINEAR PREDICTIVE VOCODING

TR-676, MS-6413

LINEWIDTH

JA-5553, JA-5587, MS-6321, MS-6394

LINEWIDTH BROADENING

MS-6394, MS-6536

LIQUID ENCAPSULATED

CZOCHRALSKI METHOD

JA-5562, JA-5623, JA-5654

LIQUID PHASE EPITAXY

JA-5514, JA-5545, JA-5654

LITHIUM COMPOUNDS

MS-6378

LITHIUM NIOBATE

JA-5429, JA-5522, JA-5559, JA-5585,
JA-5595, JA-5600, JA-5614, JA-5635,
JA-5636, JA-5637, MS-6240, MS-6277,
MS-6289, MS-6378, MS-6385, MS-6433,
MS-6508, MS-6523, MS-6528, MS-6543,
MS-6561

LITHIUM TANTALATE

MS-6378

LITHIUM TITANIUM FERRITE

TR-688

LOCAL ACCESS NETWORK

JA-5488

LOCAL OSCILLATOR

JA-5542, JA-5573, MS-6418

LORENTZ TRANSFORMATIONS

MS-6422

LORENTZIAN PROFILE

MS-6321, MS-6472

LOW COST

JA-5580

LOW ELEVATION

TR-686

LOW FREQUENCY

MS-6635

LOW INTENSITY

MS-6524

LOW RATE VOCODER

TR-676

LOW THRESHOLD

JA-5590

LOW VISION

JA-5464

LOW-GRAZING ANGLE

JA-5565

LOW-LOSS

JA-5514, JA-5614

LOW-PRESSURE CHEMICAL VAPOR
DEPOSITION

JA-5535, JA-5622

LPC (SEE LINEAR PREDICTIVE
CODING)

Subject Index

- LPC-10
TR-676
- LPCVD (SEE LOW-PRESSURE
CHEMICAL VAPOR DEPOSITION)
- LUMINESCENCE
JA-5543
- LUMPED CIRCUIT
CHARACTERIZATION
MS-6528
- MACH-ZEHNDER
JA-5522, JA-5635, MS-6240, MS-6289,
MS-6433, MS-6553, MS-6561
- MACPITTS
MS-6131A
- MAGNESIUM FLUORIDE
MS-6542
- MAGNETIC FIELD INTEGRAL
EQUATION
MS-6504, MS-6548
- MAGNETIC FIELDS
JA-5543
- MAGNITUDE
TR-707, MS-6115, MS-6394, MS-6475
- MASKED ION BEAM LITHOGRAPHY
MS-6465
- MASKING
MS-6465
- MASKLESS ETCHING
JA-5532
- MASS SPECTROSCOPY
JA-5562
- MASS-TRANSPORT
JA-5545, JA-5590, MS-6394, MS-6562
- MATCHED FILTERS
MS-6335
- MATHEMATICAL ANALYSIS
JA-5602
- MATHEMATICAL MODELS
TR-699, JA-5575
- MATRIX-MATRIX PRODUCT
MS-6445
- MAXIMUM A PRIORI PROBABILITY
ESTIMATION
TR-654
- MAXIMUM LIKELIHOOD TECHNIQUE
TR-689, TR-694, TR-705, JA-5356,
JA-5425, MS-6232, MS-6422, MS-6634
- MBE (SEE MOLECULAR BEAM
EPITAXY)
- MDAC (SEE MULTIPLYING D/A
CONVERTER)
- MEAN SQUARE ERROR
TR-654
- MEDICAL RESEARCH
TR-683
- MELT GROWTH
JA-5623
- MERCURY CADMIUM TELLURIDE
LASERS
MS-6435
- MESFETS
JA-5599, JA-5656, MS-6449A, MS-6652,
MS-6674
- METAL SEMICONDUCTOR
JA-5656
- METHYLMETHACRYLATE
MS-6400
- MFIE (SEE MAGNETIC FIELD
INTEGRAL EQUATION)
- MGS (SEE MONOLITHIC GALLIUM
ARSENIDE SILICON)

Subject Index

**MIBL (SEE MASKED ION BEAM
LITHOGRAPHY)**

MICROCHEMISTRY
JA-5539, JA-5557, JA-5658

MICROCOMPUTER
TR-712, JA-5487

MICROELECTRONICS
MS-6529

MICROFABRICATION
JA-5658, MS-6233A

**MICROMETER-SIZED CHEMICAL
PROCESSES**
MS-6411

MICROPHONES
TR-691

MICROWAVE DEVICES
JA-5570

MICROWAVE OSCILLATOR
MS-6632

MICROWAVE POWER
TR-688

MICROWAVE RADIATION
JA-5562, JA-5644

MILITARY COMMUNICATIONS
TR-681

**MILITARY SATELLITE COMMUNI-
CATION (SEE MILSATCOM)**

MILSATCOM
MS-5903

MIRRORS
JA-5590, MS-6562

MIRV
JA-5602

MIXED-MEDIA ROUTING
TR-681

MIXERS
MS-6590

**MLT (SEE MAXIMUM LIKELIHOOD
TECHNIQUE)**

**MMIC (SEE MONOLITHIC MICROWAVE
INTEGRATED CIRCUIT)**

**MMS (SEE MULTISTATIC MEASURE-
MENT SYSTEM)**

MOBILE TERMINALS
MS-6473

MODE C
MS-6526

MODE LOCKED
JA-5550, JA-5644, MS-6542

MODE S
MS-6526

**MODE S EXPERIMENTAL FACILITY
(SEE MODSEF)**

MODE SPLITTER
JA-5559

MODEMS
TR-712

MODSEF
MS-6525

MODULATION
JA-5607, JA-5637

MODULATORS
JA-5514, JA-5522, JA-5635, JA-5636,
MS-6240, MS-6289, MS-6528, MS-6553,
MS-6561

MODULES
JA-5569, MS-6385

MOLECULAR ASTRONOMY
JA-5573

Subject Index

MOLECULAR BEAM EPITAXY
JA-5560, JA-5597, JA-5656, MS-6397

MONOLITHIC CIRCUITS
JA-5536, JA-5597, JA-5599, MS-6544

MONOLITHIC GALLIUM ARSENIDE
SILICON
JA-5599, JA-5656, MS-6674

MONOLITHIC MICROWAVE
INTEGRATED CIRCUIT
MS-6449A

MONOLITHIC STRUCTURES
JA-5618, JA-5637, MS-6456

MONOPOLE
MS-6461

MONOTONE SPEECH
TR-680

MONTE CARLO
TR-654

MOON
JA-5602

MORPHOLOGY
JA-5514

MOS
JA-5606

MOS IMPLEMENTATION SERVICE
MS-6131A

MOSFETS
JA-5489, JA-5612, MS-6409, MS-6483

MOSIS (SEE MOS IMPLEMENTATION
SERVICE)

MOVING PLATFORM RADAR
MS-6335

MULTICHANNEL COMMUNICATION
MS-6335

MULTIPLE BEAM ANTENNA
JA-5476

MULTIPLE BEAMS
JA-5593

MULTIPLE BRANCHING CIRCUITS
JA-5614

MULTIPLE RATE PROCESSOR
TR-712

MULTIPLE TARGETS
MS-6634

MULTIPLE WAVEGUIDES
MS-6530

MULTIPLEXING
JA-5488

MULTIPLYING D/A CONVERTER
MS-6412, MS-6445

MULTISTATIC MEASUREMENT
SYSTEM
TR-699

MUTUAL COUPLING
MS-6461

N-COUPLED OPTICAL WAVEGUIDE
JA-5603

N-TYPE SEMICONDUCTORS
JA-5582

NARROW BAND
JA-5356

NARROW-BAND NOISE
TR-683

NAVY COMMUNICATIONS
JA-5646

NEAR INFRARED
JA-5547, JA-5627

NEGATIVE RESISTANCE
MS-6329A

Subject Index

NEW TECHNOLOGY

MS-6375

NICKEL MAGNESIUM FLUORIDE

LASER

JA-5550, MS-5264, MS-6542

NICKEL MAGNESIUM OXIDE LASER

MS-5264

NITRIDED OXIDE

MS-6589

NITRIDES

JA-5468

NODES

JA-5567, MS-6463

NOISE

TR-689, TR-691, MS-6420, MS-6431,
MS-6635

NOISE CANCELLATION

MS-6414

NOISE MEASUREMENT

MS-6418, MS-6422

NOISE REDUCTION

TR-691

NONLINEAR ESTIMATION

TR-654

NONLINEAR FILTER

TR-654

NONLINEAR OPTICS

JA-5502

NONLINEAR PROCESS

JA-5502

NONLINEAR SYSTEMS

TR-694

NONRECIPROCAL

JA-5539

NONVOLATILE SWITCHES

JA-5537

NUCLEATION

JA-5656, MS-6400A

OBJECT DETECTION

TR-705

OBSERVATION NOISE

MS-6311

OFFSET CASSEGRAIN ANTENNA

TR-662

OFFSET FREQUENCY

JA-5525

OMCVD (SEE ORGANOMETALLIC CHEMICAL VAPOR DEPOSITION)

OPEN LOOP

JA-5613

OPTICAL ANALYSIS

MS-6646

OPTICAL CIRCUITS

MS-6240, MS-6289

OPTICAL COMMUNICATION

TR-667, JA-5553, JA-5601, MS-6187A,
MS-6198A, MS-6418, MS-6497,
MS-6517, MS-6540, MS-6637,
MS-6647

OPTICAL DEVICES

MS-6375, MS-6508

OPTICAL EFFECTS

JA-5636, MS-6632

OPTICAL FIBER COMMUNICATIONS

MS-6647

OPTICAL FREQUENCIES

MS-6538

OPTICAL HETERODYNE

JA-5607, MS-6538, MS-6737

OPTICAL IMAGING

JA-5544

Subject Index

OPTICAL MEASUREMENTS

JA-5532

OPTICAL PROCESSING

JA-5502, JA-5564

OPTICAL PROPAGATION

MS-6358

OPTICAL TECHNIQUES

JA-5606, JA-5644, MS-6394

OPTICAL TESTING

JA-5399

OPTICAL TRANSMISSION

JA-5595, JA-5614

OPTICAL WAVEFRONTS

MS-6508

OPTICAL WAVEGUIDES

JA-5429, JA-5514, JA-5595, JA-5600,
MS-6433, MS-6508

OPTICALLY PUMPED LASERS

JA-5573

OPTICS

TR-662, JA-5468, MS-6115

OPTIMAL DESIGN

JA-5528

OPTIMAL SEARCHES

JA-5452

OPTIMUM ALLOCATION

TR-677

OPTOELECTRONIC SWITCH

JA-5644, MS-6423, MS-6574

ORBIT DETERMINATION

TR-618, JA-5602

ORGANOMETALLIC CHEMICAL VAPOR DEPOSITION

JA-5546, MS-6444, MS-6628

ORGANOMETALLICS

MS-6397

OSCILLATIONS

MS-5264

OSCILLATORS

JA-5676

OUTBOARD PROCESSORS

TR-681

OUTPUT POWER

MS-6556

OVERVIEW

JA-5454

OXIDATION

JA-5495, MS-6382

OXYGEN

JA-5622, MS-6409

P-TYPE SEMICONDUCTORS

JA-5582

PACKET COMMUNICATIONS

JA-5454, MS-6463

PACKET NETWORKS

JA-5488, JA-5567

PACKET RADIO

MS-6463

PACKET SPEECH

JA-5488

PACKET SWITCHING

JA-5454

PARALLEL PROCESSORS

MS-6445

PARALLELISM

TR-705

PARAMETER ESTIMATION

TR-694

PARAMETERS

TR-694, JA-5575

Subject Index

PASSIVE CHANNEL WAVEGUIDE
JA-5559

PASSIVE OPTICAL SENSOR
TR-686, MS-6634

PATTERNED GROWTH
JA-5578, MS-6400A

**PBT (SEE PERMEABLE BASED
TRANSISTOR)**

PERCEPTION
TR-680, TR-707

PERFORMANCE
JA-5575, MS-6187A

PERIODIC PROCESSES
JA-5356

PERIODIC STRUCTURE
MS-6382

PERMEABLE BASED TRANSISTOR
JA-5534, JA-5561, JA-5575, MS-6628,
MS-6635, MS-6640

PEROVSKITES
MS-6380

PHASE
MS-5959, MS-6590

PHASE CONTROL
MS-6449A

PHASE DETECTION
JA-5399

PHASE DISTORTION
MS-6358

PHASE ERROR
JA-5476

PHASE NOISE
MS-6321

PHASE SHIFTERS
MS-6347, MS-6449A

PHASED ARRAY ANTENNA
MS-6461

PHOTOACOUSTIC SPECTROSCOPY
MS-6379

PHOTOACOUSTIC TECHNIQUES
MS-6379

PHOTOCONDUCTORS
MS-5929

PHOTODEPOSITION
JA-5489, JA-5571, JA-5584, MS-6400,
MS-6400A, MS-6524

PHOTODETECTORS
JA-5399, MS-6637

PHOTODIODES
MS-5929, MS-6435

PHOTOELECTRON
JA-5574

PHOTOELECTRON SPECTROSCOPY
JA-5700

PHOTOLUMINESCENCE
JA-5654

PHOTOLYSIS
MS-6524

PHOTOMIXERS
MS-6435

PHOTONUCLEATION
JA-5578, MS-6400A

PHOTOREACTION
JA-5584

PHOTOREFRACTIVE EFFECTS
JA-5636

PHOTOREFRACTIVE TECHNIQUES
MS-6561

PHOTOVOLTAIC
JA-5495

Subject Index

- PHOTOVOLTAIC ARRAY
JA-5613
- PHYSICAL OPTICS
TR-662
- PHYSICAL PROPERTIES
JA-5538
- PICOSECOND
JA-5429, JA-5627, MS-6240
- PIEZOELECTRICS
JA-5465
- PILOT
MS-6414, MS-6525
- PIN DIODES
MS-5929
- PITCH DISCRIMINATION
TR-680
- PIXELS
TR-634
- PLANAR ARRAYS
MS-6416, MS-6461
- PLANAR DIODES
MS-6544
- PLANETS
JA-5586
- PLASMAS
JA-5495
- PLATFORMS
MS-6335
- PMMA (SEE POLYMETHYLMETHACRYLATE)
- POINT IMAGE
JA-5399
- POINT SOURCE
TR-634
- POINT TARGET
TR-634
- POINTING ERROR
TR-701
- POINTING SYSTEM
JA-5613
- POISSON PROCESSES
JA-5565
- POLYCRYSTALLINE
JA-5611
- POLYGRID
TR-681
- POLYMETHYLMETHACRYLATE
JA-5489, JA-5561
- POLYSILICON
JA-5620, MS-6402, MS-6483, MS-6564
- POWER DROPOUTS
MS-6497
- POWER SPECTRUM
TR-707
- PREDICTION ERROR
TR-694
- PRENUCLEATION
MS-6400A
- PRESSURE INDUCED
JA-5502
- PRESSURE TUNING
JA-5608
- PRESSURE VESSELS
TR-684
- PROBES
MS-5899A
- PROCESSORS
TR-712

Subject Index

PROGRAMMABLE DEVICES

JA-5537, MS-6321

PROTONS

MS-6433

PROXIMITY PRINTING

MS-6465

PULSE DOPPLER

MS-6412

PULSE POSITION MODULATION

MS-6187A

PULSE REPETITION FREQUENCY

JA-5644, MS-6445

PULSE RESPONSE

MS-6435

PULSE TRAIN

TR-680

PULSED DYE LASER BEAM

MS-6379

PULSED RADAR

MS-6445

PYROLYSIS

MS-6400

Q-ARY

MS-6187A

Q-BAND

JA-5525

Q-SWITCH

JA-5550, JA-5601, JA-5616, MS-6277,
MS-6540, MS-6647

Q-SWITCHED OPERATION

JA-5601, MS-6540

QUADRATURE COMPONENTS

JA-5526

QUANTUM EFFECTS

MS-6536

QUANTUM EFFICIENCY

JA-5546, MS-6456

QUANTUM WELLS

JA-5543, JA-5676, MS-6329A, MS-6556,
MS-6632

QUARTZ

JA-5617, MS-6334

QUARTZ CRYSTALS

MS-6277

QUASI OPTICAL MIXERS

JA-5573

QUEUEING THEORY

JA-5454

RADAR & OTHER DETECTION SYSTEMS

MS-6447

RADAR IMAGING

JA-5586

RADAR TARGETS

MS-6504, MS-6548

RADIATION COUPLING

JA-5600

RADIATION DAMAGE

JA-5549

RADIO BROADCAST

MS-6463

RADIO FREQUENCY

JA-5526

RADIO FREQUENCY COMMUNICA- TIONS CIRCUITS

MS-6590

Subject Index

- RADIO FREQUENCY MIXER
MS-6423
- RAIN
MS-5903
- RAMAN SCATTERING
MS-5899A
- RANDOM PROCESSES
JA-5425
- RANGE DOPPLER COUPLING
JA-5586
- RANGE ERROR
TR-686
- RANGE MEASUREMENTS
JA-5586
- RAPID THERMAL ANNEALING
JA-5620, MS-6483
- RARE GASES
JA-5544
- RATE LIMITS
MS-6394
- RE-ENTRY VEHICLES
JA-5554
- REACTIVE ION ETCHING
JA-5549
- REACTOR
MS-6334
- REAL-TIME
TR-701, JA-5487, MS-6475, MS-6665
- REAL-TIME SYSTEM
JA-5487
- RECONFIGURATION
MS-6564
- RECONSTRUCTION
MS-6475
- RECRYSTALLIZATION
JA-5582, JA-5612, JA-5652
- RECURSIVE SEQUENCES
JA-5356
- RED (SEE REFLECTION ELECTRON
DIFFRACTION)
- REFLECTION ELECTRON DIFFRACTION
JA-5560
- REFLECTIVITY
JA-5553, MS-6115
- REFLECTOR ANTENNA
JA-5525, MS-6473
- REFRACTION
TR-701
- REFRACTIVE INDEX
MS-6115, MS-6397
- RELAXATION
TR-688, MS-5264
- REMOTE SENSING
MS-5931
- RESIDUAL DONOR
JA-5562
- RESOLUTION
MS-6232, MS-6465
- RESONANCE
JA-5502
- RESONANT TUNNELING
MS-6329A, MS-6632
- RESONATORS
JA-5676
- RESTRUCTURABLE VLSI (SEE RVLSI)
- RICCATI EQUATION
JA-5297
- RIPPLE
MS-6382, MS-6447

Subject Index

RNAV

JA-5580

ROTARY-TABLE

MS-6334

ROTATIONAL LINES

JA-5542

ROTORS

TR-684

ROUTING

TR-681, JA-5454

RS-449

TR-676

RTA (SEE RAPID THERMAL ANNEALING)

RUTILE

MS-6380

RVLSI

MS-6413, MS-6665

S-PARAMETERS

MS-5959

SAMPLE AND HOLD

MS-6423

SAMPLING

JA-5526, MS-6590

SATELLITE COMMUNICATIONS

JA-5593, MS-6473

SATELLITE CROSSLINKS

TR-667

SATELLITE IDENTIFICATION

MS-5931

SATELLITE LINKS

MS-5903

SATELLITE NETWORK (SEE SATNET)

SATELLITE TERMINALS

JA-5525

SATELLITE TRACKING

MS-5931

SATNET

JA-5488, JA-5567

SATURATION

JA-5608

SCAN/SET

TR-685

SCATTERING

TR-662, TR-709

SCHAWLOW-TOWNES FORMULA

JA-5553, MS-6321

SCHOTTKY BARRIERS

JA-5575

SCHOTTKY DIODE

JA-5542, JA-5573, MS-6307A

SEARCH THEORY

JA-5452

SECONDARY ION MASS

SPECTROMETRY

JA-5622, MS-6409

SEGMENTATION

MS-6449A

SELENIUM

JA-5544, JA-5570

SELF-ALIGNED DUAL-GRATING

JA-5561

SEMI-INSULATION

MS-6637

SEMICONDUCTING COMPONENTS

JA-5538

SEMICONDUCTOR DEVICES

JA-5575, MS-6646

Subject Index

SEMICONDUCTOR DIODE LASERS

JA-5547, JA-5587, MS-6472

SEMICONDUCTOR JUNCTION LASER

JA-5582

SEMICONDUCTOR LASERS

JA-5429, JA-5551, JA-5607, MS-6418,
MS-6422, MS-6497, MS-6517, MS-6737

SEMICONDUCTORS

JA-5465, JA-5489, JA-5495, JA-5554,
JA-5562, MS-6334, MS-6553

SENSOR ARRAY

MS-6416

SHALLOW-HOMOJUNCTION CELLS

JA-5495, JA-5546, MS-6444, MS-6452,
MS-6456, MS-6651

SHIFT REGISTERS

TR-685

SHORT-TIME FOURIER TRANSFORM

TR-707

SIGNAL PROCESSING

JA-5429, JA-5564, JA-5585, JA-5606,
JA-5637, MS-6233A, MS-6289, MS-6375,
MS-6378, MS-6412, MS-6423, MS-6438,
MS-6574

SIGNAL PROCESSOR

MS-6385

SIGNAL RECONSTRUCTION

MS-6420

SIGNAL-TO-NOISE RATIO

TR-671, MS-6335, MS-6431

SIGNAL-TO-NOISE RATIO

CALCULATION

TR-634

SIGNALS

TR-691

SIGNATURE GENERATION

TR-685

SILICIDES

MS-6483

SILICON

JA-5489, JA-5534, JA-5539, JA-5549,
JA-5562, JA-5570, JA-5582, JA-5585,
JA-5656, MS-6382, MS-6456, MS-6523,
MS-6640

SILICON BOLOMETER

JA-5536

SILICON DIOXIDE

JA-5468, JA-5700, MS-6589

SILICON FILMS

JA-5527, JA-5535, JA-5612, JA-5622,
MS-5899A

SILICON OXYNITRIDE

JA-5535, JA-5574, JA-5612, JA-5700

SILICON SUBSTRATES

JA-5560, JA-5597, JA-5612, JA-5653,
JA-5656, MS-6652, MS-6665, MS-6674

SILICON WAFER

JA-5620

SILICON-ON-INSULATOR

JA-5535, JA-5612, JA-5622, JA-5652,
MS-6409

SILVER

MS-6382

SIMS (SEE SECONDARY ION MASS SPECTROMETRY)

SIMULATION

TR-689, MS-6445

SINGLE CRYSTAL FILMS

JA-5536

SINGLE CRYSTALS

JA-5597

SINGLE-JUNCTION CELLS

JA-5569, JA-5611, MS-6674

Subject Index

SINGULAR INTEGRAL

JA-5554

SINGULAR VALUE DECOMPOSITION

MS-6420

SINUSOIDS

TR-689, MS-6475

SNR (SEE SIGNAL-TO-NOISE RATIO)

SOLAR CELLS

JA-5546, JA-5569, JA-5611, MS-6444,
MS-6450, MS-6452, MS-6456, MS-6674

SOLAR CLOCK

JA-5495

SOLID STATE LASERS

JA-5551, MS-6380

SPACE APPLICATIONS

MS-6198A, MS-6450

SPACE COMMUNICATIONS

MS-6198A

SPACE OBJECTS

JA-5586

SPATIAL ACQUISITION

TR-667, MS-6198A, MS-6737

SPATIAL ALGORITHMS

MS-6198A

SPATIAL LIGHT MODULATION

JA-5564, MS-6438

SPATIAL RESOLUTION

JA-5476, JA-5539, JA-5557, MS-5899A,
MS-6394

SPECKLE

MS-6232

SPECKLE IMAGE

MS-6232

SPECTRAL ANALYSIS

JA-5587, MS-6431, MS-6438

SPECTRAL COMPRESSION

JA-5569

SPECTRAL DENSITY

MS-6417

SPECTRAL ESTIMATION

TR-654, JA-5356, JA-5425

SPECTRAL LINES

JA-5543

SPECTRAL MAGNITUDE

MS-6475

SPECTRAL SPLITTING

JA-5569

SPECTRAL STUDIES

JA-5547

SPECTROGRAM

TR-707

SPECTROSCOPY

JA-5574, JA-5654, MS-6379

SPEECH

MS-6414, MS-6475

**SPEECH ANALYSIS/SYNTHESIZER
SYSTEM**

TR-707

SPEECH CODING

JA-5356

SPEECH COMMUNICATIONS

JA-5488

SPEECH COMPRESSION

TR-712

SPEECH ENHANCEMENT

TR-691

SPEECH PROCESSING

TR-680

SPEECH PROCESSOR

TR-712

Subject Index

SPEECH RECOGNITION
TR-671, TR-707, MS-6413

SPEECH WAVEFORM
MS-6475

SPICE (LINCOLN COMPUTER
PROGRAM)
MS-6131A

SPLITTING RATIO
JA-5559, JA-5614

SPOT BEAM ANTENNA
JA-5525

SPREAD SPECTRUM
MS-6385

STABILITY
TR-684, MS-6447

STATE ESTIMATION
JA-5297

STATIC INDUCTION TRANSISTOR
MS-6640

STATISTICAL PROCESSES
TR-705

STATISTICAL VARIATION
TR-686

STENCIL
MS-6465

STFT (SEE SHORT-TIME FOURIER
TRANSFORM)

STOCHASTIC MODEL
TR-705

STOCHASTIC PROCESSES
JA-5502, MS-6417

STRIATIONS
JA-5623

STRIP HEATER
JA-5535, JA-5622, MS-6409

SUB-BOUNDARIES
JA-5535, JA-5622, MS-6409

SUBMARINE COMMUNICATIONS
JA-5646

SUBMICROMETER PATTERNING
TECHNOLOGY
JA-5557

SUBMICROMETER PROCESSING
JA-5532, JA-5534, JA-5557

SUBMICROMETER STRUCTURES
JA-5549

SUBMICROMETER TECHNOLOGY
JA-5557

SUBREFLECTORS
TR-662

SUBSONIC AIRCRAFT
MS-6463

SUBSTRATES
MS-6334

SULFIDES
JA-5654

SULFUR
JA-5562

SUPERCONDUCTIVE ANALOG SIGNAL
PROCESSING DEVICES
MS-6233A

SUPERCONDUCTORS
MS-6375

SUPERCOOLING
MS-6409

SUPERSONIC FLOW
JA-5542

SURFACE ACOUSTIC WAVE
JA-5465, MS-6277, MS-6375, MS-6378,
MS-6379

Subject Index

SURFACE CHEMISTRY

MS-6397, MS-6400

SURFACE MICROSTRUCTURES

MS-6382

SURFACE PHOTOACOUSTIC WAVE SPECTROSCOPY

MS-6277, MS-6379, MS-6527

SURFACE PROCESSING

MS-6524

SURFACE RADIATION

MS-6397

SURFACE-PHASE PHOTOCHEMISTRY

MS-6400

SURFACES

JA-5514, JA-5584, MS-6651

SURVEILLANCE

MS-6526

SVD (SEE SINGULAR VALUE DECOMPOSITION)

SWEPT FREQUENCY

JA-5635

SWITCHING

TR-681

SWITCHING CIRCUITS

MS-6347

SYNCHRONOUS GARBLE

MS-6526

SYNTHESIZER

MS-6321

SYSTOLIC ARRAYS

TR-705, MS-6363, MS-6413

TAFF-HALL

TR-618, JA-5602

TANDEM SOLAR CELLS

JA-5569, MS-6444, MS-6452, MS-6456,
MS-6674

TANDEM STRUCTURES

JA-5528

TANTALUM

MS-6483

TANTALUM SILICIDE

JA-5620

TAPPED DELAY LINES

MS-6233A

TARGET DETECTION

MS-6363

TARGET LOCATION

TR-701

TARGET TRACKING

JA-5297

TCAS II

MS-6525, MS-6526

TEMPERATURE DEPENDENCE

MS-6536

TEMPERATURE SENSORS

MS-6240, MS-6289

TEMPLATE

JA-5617

TERMINAL DEFENSE

TR-677

TERMINALS

MS-6473

TERRAIN

JA-5565, JA-5586

TEST & EVALUATION

JA-5537

TEST FACILITIES

TR-683

Subject Index

TEU (SEE TRAFFIC ALERT & COLLISION AVOIDANCE EXPERIMENTAL UNIT)

THERMAL ANNEALING
JA-5582, MS-6307A, MS-6483

THERMAL FIXING
JA-5636, MS-6561

THERMAL NITRIDE
JA-5574, JA-5700

THERMAL NOISE
MS-6635

THICK FILMS
JA-5468, JA-5527

THIN FILM GROWTH
MS-6400A

THIN FILMS
MS-5899A, MS-6115, MS-6277,
MS-6379, MS-6400, MS-6527

THIN SURFACE FILMS
MS-6277

THREE-DIMENSIONAL IMAGE
MS-6232

THRESHOLDS
JA-5590, MS-6526

THUNDERSTORMS
MS-5903

TIBA (SEE TRIISOBUTYLALUMINUM)

TIME BANDWIDTH PRODUCTS
MS-6385

TIME DOMAIN
MS-6335

TIME INTERVAL COUNTER
MS-5959

TIME-INTEGRATING
MS-6438

TIN
JA-5538

TITANIUM
JA-5429, JA-5559, JA-5600, JA-5614,
JA-5635, JA-5636, MS-6240, MS-6289,
MS-6561

TITANIUM TETRACHLORIDE
JA-5584, MS-6400

TITANIUM: LITHIUM NIOBATE
JA-5600, MS-6433, MS-6528

TJS (SEE TRANSVERSE JUNCTION STRIPE)

tone FREQUENCIES
TR-680

TOPOGRAPHIC IMPERFECTIONS
JA-5535

TRACK INITIATION
MS-6634

TRACKING
MS-6416, MS-6463, MS-6634

TRACKING FILTER
TR-699

TRACKING SYSTEMS
JA-5613, MS-6737

TRADEX
TR-699

TRAFFIC ALERT & COLLISION
AVOIDANCE EXPERIMENTAL UNIT
MS-6525

TRANSCONDUCTANCE
JA-5599

TRANSIENTS
MS-6470

TRANSISTORS
JA-5465, JA-5575, JA-5599

Subject Index

TRANSITION METAL-DOPED LASER
MS-5264

TRANSMISSION ELECTRON
MICROSCOPY
JA-5534

TRANSMITTERS
MS-6447

TRANSPORTABLE MEASUREMENTS
RADAR
MS-5931

TRANSVERSAL FILTER
MS-6233A

TRANSVERSE ELECTRIC-TRANSVERSE
MAGNETIC MODE
JA-5559, JA-5635, MS-6538

TRANSVERSE JUNCTION STRIPE
JA-5587, JA-5627

TRAVELING WAVES
JA-5635, MS-6528

TRIISOBUTYLALUMINUM
JA-5578

TRIMETHYLALUMINUM
JA-5584, MS-6400

TRISTATIC TRACKING FILTER
TR-699

TRUNCATION
MS-6420

TUNABLE DIODE LASER
MS-6321

TUNABLE LASER
JA-5550, MS-5264

TUNGSTEN
JA-5534, JA-5653

TUNGSTEN SILICIDES
MS-6640

TUNNELING
JA-5676

TWO-CELL TANDEM STRUCTURE
JA-5611

TWO-DIMENSIONAL
JA-5425, JA-5557

TWO-DIMENSIONAL IMAGING
MS-6363

TWO-PHOTON PROCESS
MS-6277, MS-6379

TWTA
MS-6447

ULF (SEE ULTRA LOW FREQUENCY)

ULTRA LOW FREQUENCY
JA-5646, MS-6470

ULTRAVIOLET IRRADIATION
MS-6397

ULTRAVIOLET LASERS
JA-5489, JA-5584, MS-6400A, MS-6529

ULTRAVIOLET RADIATION
JA-5578

ULTRAVIOLET SPECTRA
JA-5571

UNSEEDING
JA-5527

UPLINK COVERAGE MEASUREMENT
JA-5593

USER GUIDE
TR-676

VAPOR DEPOSITION
MS-6628

VAPOR PHASE EPITAXY
JA-5534, JA-5561, JA-5654

Subject Index

VAPOR PHASE REACTION
MS-6334

VARACTORS
MS-6544

VENUS
JA-5573

VERY HIGH FREQUENCY
MS-6470

VERY HIGH SPEED INTEGRATED
CIRCUITS (SEE VHSIC)

VERY LARGE SCALE INTEGRATION
(SEE VLSI)

VERY LOW FREQUENCY
JA-5646

VHF (SEE VERY HIGH FREQUENCY)

VHSIC
MS-6375

VISIBLE LASERS
MS-6529

VISUAL IMAGES
JA-5464

VISUAL IMPAIRMENT
JA-5464

VISUAL PERCEPTION
JA-5464

VLF (SEE VERY LOW FREQUENCY)

VLSI
TR-685, JA-5489, JA-5571, JA-5574,
JA-5606, JA-5620, MS-6483

VOCODED SPEECH
TR-671, TR-680

VOCODER
TR-680, TR-683, TR-707, TR-712

VOICE COMMUNICATIONS
TR-671, JA-5567

VOICE TERMINAL
TR-676

VOLTAGE
JA-5676

W PHASE
JA-5653

WAFER SCALE INTEGRATION
MS-6413

WAFER WARPAGE
JA-5535

WAFER-SCALE CIRCUITS
JA-5537, MS-6519, MS-6541, MS-6665

WAFERS
JA-5535, JA-5545, JA-5574, JA-5582

WAVEFORM CODER
MS-6475

WAVEFORMS
JA-5526, MS-6232, MS-6590

WAVEGUIDE BENDS
JA-5595, JA-5614

WAVEGUIDE LENS
JA-5603

WAVEGUIDES
JA-5559, JA-5600, JA-5636, MS-6240,
MS-6433, MS-6530, MS-6543

WET ETCHING
JA-5532

WHITE NOISE
JA-5297, MS-6431

WIDE BAND
JA-5585, MS-6233A

WIDE BANDWIDTH
MS-6435

Subject Index

WIDE-BAND NETWORK

JA-5567

WIDE-BAND PACKET NETWORK

JA-5567

WIDE-BAND SIGNALS

MS-6416

X-RAY DIFFRACTION

MS-6483

X-RAY PHOTOEMISSION

JA-5700

X-RAYS

JA-5574

YAG LASERS

MS-6277

YTTRIUM ALUMINUM GARNET

MS-6277

ZERNIKE

JA-5399

ZINC SULFIDE

JA-5611

ZONE-MELTING RECRYSTALLIZATION

JA-5527, JA-5535, JA-5612, JA-5622,
JA-5652, MS-6409

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